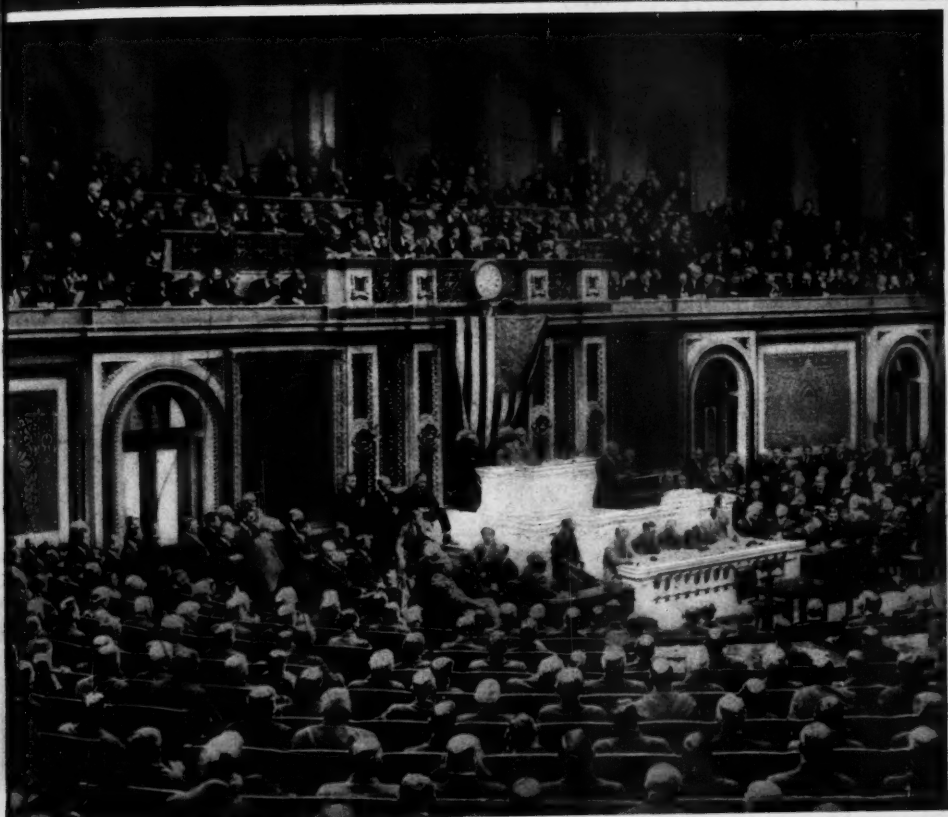


# THE DENTAL DIGEST



PRESIDENT WILSON ADDRESSING THE SENATE  
FEB. 3, 1917

MARCH 1917  
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# THE DENTAL DIGEST

Vol. XXIII

MARCH, 1917

No. 3

## GUM BLOCKS FOR PARTIAL DENTURES

BY WALTER M. BARTLETT, D.D.S., ST. LOUIS, MO.

PROFESSOR PROSTHETIC DENTISTRY, WASHINGTON UNIVERSITY

The large number of cases calling for partial dentures of various types constitutes one of the most serious problems for the dentist with a sense of esthetics.

Where one or more teeth are lost the usual amount of resorption soon necessitates the use of artificial teeth which are much longer than the remaining natural teeth, or artificial teeth of the correct length with the amount of absorption compensated for by the use of pink vulcanite; either method being unsightly, and to discriminating people, decidedly objectionable.

Up to the present, porcelain is the best material we have for the reproduction of both tooth and gum tissue and it is quite as desirable to make a life-like artificial gum as it is to imitate the natural teeth, especially in partial cases where the line of union of the natural and artificial gum is visible when the lips are raised or lowered.

The gum blocks as formerly supplied by the manufacturers were better than pink vulcanite restorations, but were makeshifts at best, because the color of the natural gum and the ready-made gum block scarcely ever coincided, and the contour of the natural gum and the stock form of the back of the gum block made extensive grinding the usual procedure and proper union a pure chance, because it was not always dependent on the skill of the dentist as much as on the original outlines of the block and the natural contour.

The author's method of meeting these conditions is a modification of continuous gum technic, greatly simplified, and comparatively easy.

Having secured a good impression, bite, and plaster cast of the case in the usual manner, and mounted the case on an articulator, the proper platinum pin teeth are selected and arranged, ground if necessary and articulated.

The teeth are then removed as is also all wax taken from the cast, and the proposed outline of the restoration determined. The cast is

slightly scraped where the edges of the gum restoration are designed to meet the gum, to insure close adaptation of the finished case. A piece of platinum foil is then burnished over that portion to be occupied by the porcelain, and extended slightly over the ridge for convenience of handling. There should be no undercuts, and the easy removal of the foil should be provided for.

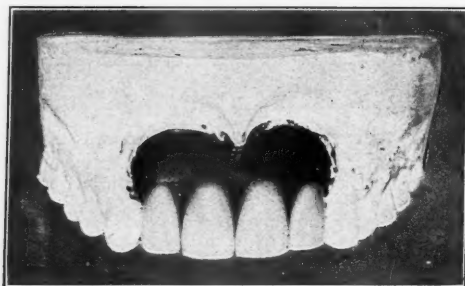


Fig. 1—Showing case waxed ready for investment

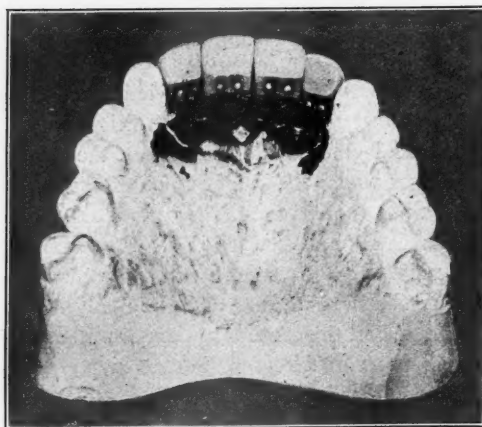


Fig. 2—Showing lingual aspect of case as waxed up in Figure 1. Platinum foil shows black in the picture. Note pins free from wax

The foil is then lightly waxed to the cast at one or two points and wax adapted over the portion to be covered by the porcelain gum. The teeth are then returned to the cast, being attached by inserting the necks into the wax, care being taken to avoid getting wax on the pins.

After the wax is built up and contoured to the form of the proposed gum, the assembled piece is carefully removed from the cast and in-



vested in a mixture of two parts of tenax to one of plaster, pins down, the investment being as small as consistent with strength.

The wax is then scalded out thoroughly and the investment slowly heated to drive off moisture, after which continuous gum body is filled

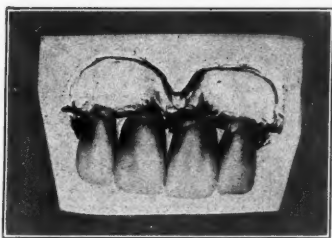


Fig. 3—The case invested. Wax is boiled out and case ready for porcelain body

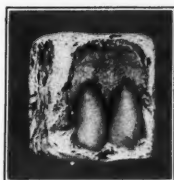


Fig. 4—This shows a case after the first baking before the application of gum enamel

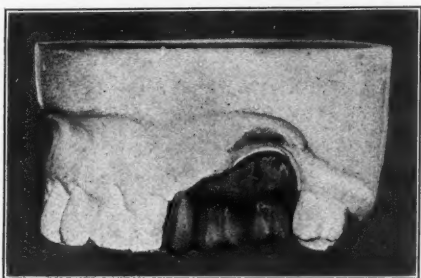


Fig. 5—Two bicuspid with the application of gum block as described in this article

into the space between the teeth and the foil formerly occupied by the wax.

The gum is carved to desired contour and great care is used to have the approximal and labial surfaces of the teeth free from porcelain body.

After carefully drying, the case is ready for fusing.

As is well known, porcelain body always exhibits contraction when baked, but in simple cases the contraction is so slight that it is compensated for and covered over by the addition of gum enamel. When

the contraction is considerable, a second application of body should be made and fused after which the gum enamel is applied and fused.

When the case has thoroughly cooled remove the platinum foil by simply peeling it off, and smooth the sharp margins of the porcelain with a fine disk.



Fig. 6—Treatment of two centrals which would have called for long teeth if the old method was followed

If the gum is contoured to approach the margins gradually, instead of abruptly, and the shade of the gum enamel has been carefully selected, the restoration will be difficult of detection by any but a practised eye.

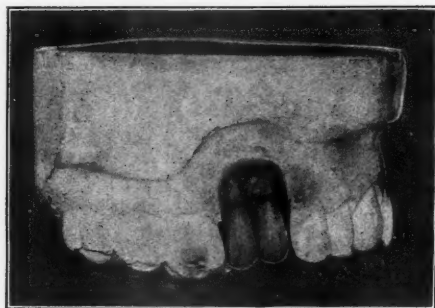


Fig. 7—Showing the possibilities of the method described in cases of irregular gum outline or uneven resorption

This method does not depend entirely on the advantage of beautiful gum restoration, but presents many points of superiority. It does not require unusual skill. It is applicable to removable bridgework as well as partial vulcanite dentures.

It allows the selection and arrangement of individual teeth and their anatomical articulation, which is impossible with stock gum blocks.

The technic is simple, the operation inexpensive, and the restoration satisfactory, particularly from the standpoint of beauty and efficiency.

The difficulty and expense of root canal treatment is now influencing and will no doubt continue to influence the extraction of many teeth that have heretofore been retained. The disadvantages and limitations of fixed bridgework are also becoming generally recognized and these two factors are directing our attention as dentists to the various types of partial dentures and in almost every case where any but the most temporary denture is required, we find a loss of process and gum tissue by resorption which should be acceptably restored quite as much as the missing tooth structure.

Long, shapeless teeth, or the usual lifeless and frankly artificial pink vulcanite gums have been used all too frequently, and both the profession and the laity are dissatisfied, but there has really been no practical method heretofore which was not prohibitive in cost, or which did not require a high order of skill.

It is to supply a real need of prosthesis, that this simple and effective method is offered the profession at large.

WALL BUILDING.

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## DENTISTRY

BY S. SYDNEY URROWS, D.D.S., BOSTON, MASS.

Are we progressing? Every once in a while someone, with a tinge of pessimism in his tone, tells us how much better it was in the old days, before we had "so much theory" and had "more practical dentistry." But what are the facts? It is claimed that better practical dentists were made in former years than now. We surmise that a practical dentist is meant for one who knows the science and art of Dentistry and is skilled in its application.

If we examine the records of more than a generation ago, we find that dentists of that period knew no more of the causes of dental caries than did their predecessors. The records show that only within the last half century has the successful treatment of pulpless teeth been a practical possibility—mainly because the relation of bacterial infection to periapical inflammation was unknown. And until it was, the loss of a pulp was, in the majority of cases, equivalent to the loss of a tooth. The practical dentists of a generation ago knew but little of pathology, and nothing of bacteriology in relation to disease, for the reason that the data upon

which these important branches are based, were not then discovered. Since the discovery, the errors of practice of former years, due to lack of pathological data, have been corrected, and scientific modes of procedure are being substituted.

That they filled teeth in those days, and with great skill, no one can deny, but has any one given us a record of teeth they ought to have filled and didn't, because from lack of sound scientific knowledge of pathology they were unable to restore their roots to a condition of normal health, so that they would endure restoration by filling.

We hear much of their great skill in the matter of mechanical dentistry. Then it was that the practitioner was taught to compound, carve, and bake the teeth, which he supplied to his patients.

To-day, any new graduate could surpass in all the essential particulars of functional usefulness and artistic merit.

The commercial production of artificial teeth in these modern times has made it unnecessary for the dentist to manufacture the porcelain teeth which he supplies to his patients. Were it to become necessary, however, we believe the manipulative skill of the modern dentist, as displayed in other branches, to be sufficient to enable him to surpass the results obtained by his predecessors.

Good, practical dentists, to-day constitute the average of the profession.

Many operations of to-day, the dentists of the old day were unable to perform, because they did not have the necessary knowledge. The skill of the chosen few may have been greater than that of the average practitioner of to-day, but its range of application was limited by the limitations of their knowledge, for no man can do more than he knows how to do. When we consider the skill required to successfully save teeth by modern methods of filling, or combat the disorders dependent of death of pulp, or to construct prosthetic restorations comprised in modern crown and bridgework, we are inclined to think that the majority of practical dentists of the old school would have to take a more thorough course before competing in a community with a good, practical dentist of to-day.

In the earlier period, the causes of caries, the causes of diseases of the pulp and peridental membrane, of erosion of teeth, and of the disorders of the oral cavity generally were unknown. The results in modern research in all departments have not only improved our methods and our materials but have given us the means of intelligently applying them to practice. With increased educational requirements, and the promotion of Oral Hygiene, the profession is one to be proud of.

## ORAL PROPHYLAXIS AND SOME PERTINENT POINTERS

BY E. CHAPMAN, D.D.S., MINNEAPOLIS, MINN.

SPECIALIZING IN PROPHYLAXIS (PREVENTIVE DENTISTRY)

Oral prophylaxis, the continual supervision over the mouth, at stated intervals, demonstrates what to-day is well known, that ninety per cent. of all visible dental troubles are avoidable.

Oral prophylaxis is a type of practically standardized technic that can be found at the hands of a few practitioners of any large city to-day. It is simply applying the same idea to the teeth that the auto owner (that is, the careful owner) does to his car. Instead of allowing the battery to go down and out with the possibility of expensive battery repairs, or the possibility of having to buy a new one, an expensive pleasure, he has his battery inspected regularly as advocated by the various battery stations. Also, to get any kind of service and life from his tires, he uses a tire gauge so as to know what pressure the tires carry. Result, longer life and better service from tires. Result of not doing so—buy new tires—this is the expensive way out.

Prophylaxis differs from the ordinary "cleaning" in that it never can be done in the time usually given the former. It is much more thorough, and individual attention is given each tooth and surface of same by hand polishing, not power. It is a system of going over the teeth in which the coöperation of the patient is secured in the maintenance of results secured. The patient's date of treatment is kept and a suitable period for the patient's return selected, at which time a card from the file is sent, notifying the patient to come in for another prophylactic treatment.

We have competent operators to-day, who having mastered the scaling technic in pyorrhea and the monthly prophylactic treatments are achieving wonderful results in mouth hygiene and who, needless to say, have a clientele that possesses to-day facts in connection with oral hygiene that are years ahead of what even a great many dental practitioners have.

All my patients, on taking the chair, are instructed in the very latest methods and technics of same as followed by our best prophylactic operators in their clinics and writings. The patient gets this going over whether he's interested or not—whether he wants it or not. It's his business to know it and when I get through I find a very high average of patients to be interested in my work when its advantages are made known.

Of course the patient's mind should be made clear as to the fact that prophylactic surface treatments are the cleaning of teeth in the manner par excellence, and indicated not only for patients having pyorrhea but for any patient having a mouth. No mouth is so healthy or finely cared for but that prophylaxis will "show it up" a bit—not only keep it that way but will improve it and cause it to take on a still better appearance. To my mouth, it is what exercise is to the muscles. To the mouth free from pyorrhea it will keep it from setting in—to the mouth just freed from pyorrhea it is the only hope in now keeping it from returning.

My patients are first shown, by the now widely known disclosing solution of Skinner's, the bacterial coats on the necks of their teeth and the interproximal space. We have known for years that the deposits were there; we can now actually show them on his own teeth to the patient in the chair. They are then informed that this acid causing condition is the excitant factor in causing the marginal inflammation of the gum tissue and underlying bone, and informed that this deposit (now visible to the eye) is the decay-producing material that causes the gum recession, the etching of the enamel at the gum margin and the only reason for the decay of the tooth surfaces. Next, the willow wood point is brought into play in a hand porte polisher with suitable powder so as to have no abrasive wearing crystalline grit such as pumice, which should never be used on tooth surfaces because it is wearing and leaves a dulled surface which readily collects foreign material again, and is therefore doubly, trebly, hard to keep clean afterward.

The carmi cleaner as I use it is mixed with glycerine for several reasons, viz:

It thus makes a mixture softening to the bacterial plaques revealed by the disclosing solution on the tooth surface.

It allows the wood point to select even so small a body of powder to deposit on the plaque, does not "run" like powder mixed with a mouth wash or watery solution, thus does not cloud or smear the working area.

You get no wear on the tooth surface no matter how frequent this type of cleaning, as you merely rub off the stained deposit or plaque and the tooth surface beneath you then let alone—unlike the engine brush pumice "cleaning" where you scour the tooth surface complete, irrespective of where the real "dirt bearing area" is.

Two or three teeth cleaned at a time, then passing to next two or three; retouching again and again till disclosing solution shows surface to be absolutely clean and free from bacterial and tarter coat at gum edge; this process carried on till mouth is completed, plus the compressed air sprays and the wide silk band Purosis tape; polishing of the necks of each individual tooth in the spaces between, constitutes my oral pro-

phylactic or surface treatment of the teeth, which is carrying out the cleaning process to an heretofore unprecedented refinement.

The dental nurse will be a valuable feature of the future dental office along this line. As a dental hygienist, her work will be limited to surface treatments exclusively, the law preventing its being carried beyond this point. Therefore, her work to consist of tartar removal and surface cleaning by approximate method of use of disclosing solution to show same. The average operator's time is so well taken up by attention to reparative measures that this undeniably important service is of necessity extremely hard to procure at his hands, and as it is not being given for the above reason it must be procured somewhere—therefore, the operator specializing in this work, Prophylaxis and Pyorrhea, or the dental hygienist for the first named.

If an operator has not the time, inclination, equipment, or knowledge of the technic or work of prophylaxis (Preventive Dentistry), he should refer patient for this service, as no operator in heavy operative practice can do justice to this work on account of the time it takes.

As to technic again, the stroke of the wood point in the porte polisher should be from circular to longitudinal steadily to avoid any possible grooving of surfaces. The touch should be natural if possible, but if not, then acquired, delicate but forceful enough to remove the plaque accretions, etc., after located.

Oral prophylaxis or mouth hygiene should start with the child of to-day and the future at the age of three years when the first set is complete. If placed in the hands of a prophylactic operator the child can be carried for years with no cavity appearing. I require at least monthly inspection of the mouth in order to obtain this result and have a set fee for the year for so doing, which is payable six months in advance—the two payments. If the child's teeth do not show a natural separation in front at the age of five years they should receive an artificial separation here at the hands of an orthodontist, otherwise the second set will be irregular. The first set with the resorbing root ends have the second set tooth directly following and therefore should be under constant supervision, not of the parent, but of the operator to guard against disease, premature extraction, etc., which allow the teeth to shift and close the spaces formerly held for the second teeth, thus they come in crooked, and out of the arch line. Even a decayed tooth, yet unextracted, allows a shift in space from 25 to 35 per cent. in untold instances.

By loss or decay, allowing the six-year old permanent molar to shift forward, the jaw never obtains the full backward development for space for third molar—thus the facial contour is never what nature intended it to be in instances where this is allowed to occur. The loss of six-year



molar is irreparable—it often needs attention at the very outset of its appearance—it usually on account of its early appearance is mistaken for a first set tooth and allowed to break down beyond repairs.

Then the abscess. Who knows what the danger of the all too common deciduous abscess may be. If the blind abscess is producing heart vegetations with consequent leakage of heart valves, the kidney and other systemic complaints in the adult, may it not be asked, how can the child of the future be allowed to carry the abscesses it now does from the age of four, five or six years up to twelve and thirteen and on, as the parent allows to-day in his or her own case and the medical profession directing them to "cut it out" from now on. But, till the parent gets busy the child can't be reached. This condition must be met and nothing can or ever will eradicate it but periodic inspection and oral prophylaxis.

Contact is an extremely important factor either to be maintained as nature made it, or improved artificially, but maintained or replaced always. This prevents wedging of food particles and attendant diseased or pyorrheal conditions in the gum septal space which later form the food pocket or trap so bothersome to the patient and inevitably leading to pyorrhea, decay and loss of the bony support of the teeth, to say nothing of the rotting condition always present in these spaces, affecting the breath and stomach conditions and the health.

#### SENSITIVE AREAS

Sensitive areas at gum lines are caused by the gellatinous plaques at the neck of the tooth at the gum edge. These form an acid condition—the neck of the tooth being sensitive—no tooth brush, paste or powder does all that is necessary in removing these deposits and preventing pyorrhea. The disclosing solution used in prophylactic cleanings to detect their location shows the cause of the etching and destroying of enamel at gum margin, and this sensitive uncovering of nerve endings can here be eradicated by a prophylactic operator using a 10 per cent. A.G. No. 3 solution in front and up to 50 per cent. and saturated on posterior. Ten per cent. is used in front to avoid straining. Deliquescent zinc chloride is also used for the same purpose of cauterizing the nerve terminals or filaments. Fine Arkansas stones of suitable form are used on tooth surfaces to obliterate and polish out roughness of enamel at gum margin, thereby breaking up deposit points for bacteria, as shown by disclosing stain.

The above constitutes preventive work, in that the mouth should be watched to prevent last-named conditions setting in; having set in, the surfaces should be easily corrected by prophylactic grinding and polishing of a light character rather than let it go to the point where the engine

and drill is sunk into enamel and clear through, and to the nerve to place a filling.

The X-ray showing where whole jaw is X-rayed and apparently slight gingivitis showing the absorption of  $\frac{1}{8}$  to  $\frac{3}{16}$  inch and more of the pointed bony process between different teeth, leads us to look back at that gum margin again and shows the necessity of constant prophylactic care even in mouths apparently normal. Deep pyorrhea sockets are detected by careful exploration and X-ray work; under X-ray in bad case to show amount of destruction done—chance of saving—locating abscess areas at root ends, etc.

The X-ray in most instances is used to locate the infection and extent of same after patient has allowed the bacteria to lie on tooth surface, then penetrate it—now a small “spot cavity” steadily going onward toward the nerve—now up the nerve or root canal—now out through root end into the cancellous jaw bone and causing necrosis or death of the jaw, sometimes septicaemia (blood poisoning) and death—or if there’s no such hurry it may be content to just simply give them heart or kidney disease, rheumatism or the like.

Now prophylaxis locates that little surface bug by scores lying there by the use of disclosing solution. Remove by hand polishing and set back the attack just that much each time. This is prevention and preferable to the first.

The proper style of cleaning teeth, the prophylactic, provides a style of going over surface treatments in which there is no surface wear and a constant periodical repetition is advisable.

The importance of oral prophylaxis is vividly brought to the notice of the dental profession not only in the fact that hardly a dental journal in the last few years fails to carry an article or two on it in each issue, but also the Panama Pacific Dental Congress in San Francisco, August 30th to September 9th, had as the “salient features of this congress,”\* “Novocain Anesthesia and Pyorrhea and *Prophylaxis*.”

#### PERTINENT POINTERS

Practically all deaths from disease to-day are from what Fischer has termed “low grade infections.” These are the type that mean a focus of infection somewhere, sending its bacteria and their products into the circulation and gradually breaking down some organ here or there, a heart or a kidney, the stomach, the blood-vessels, or the joints, etc. These processes in some instances require months and years to do the work, but depend upon it, “good work” is usually done. Dr. Charles

\*Journal of the National Dental Assoc. 412, Nov., 1915.

Mayo, Rochester, says, "Seventy-five per cent. of all operations at Rochester are abdominal and that all are practically traceable back to mouth conditions." The X-ray shows untold foci of above type in blind abscesses at root ends, pyorrhea pockets, bone absorption in jaw, etc.

#### THE EMPLOYER

The employers of large forces of men and women are realizing that mouth and teeth conditions have a great deal to do regarding the efficiency of their working forces. I have correspondence from Larkin Co., Buffalo; Swift Packers, Chicago; Heinz Preserving Co., Pittsburg, Wanamaker, New York, etc. In these letters each firm brings out the point strongly that the furnishing of free dental service to their employees has well repaid itself and is greatly appreciated. Wanamaker's letter says: "We have had a dental clinic established at the Wanamaker organization for several years and believe we have had wonderful returns from its installation." Also says: "We confine a great deal of our efforts to prophylactic work, insisting upon this particularly to those under sixteen years of age." Heinz's letter, among other points, states, "along with this professional attention is given a good deal of instruction in the care of the mouth and consequently, the influence is more far-reaching than the mere work of the clinic." Letter from Armstrong Cork Co., Pittsburg, states, "Our people appreciate the service and make general use of it. We believe it has done its part to create a friendly feeling between the company and its employees. We believe we get some return in the way of increased efficiency." The Armstrong clinic was started in 1911.

We have preventive dentistry here to-day, an established, standard technic with an absolute invitation extended to the public to allow the operators in this field to make good their claims. The technical demonstration is unfailingly convincing. The prophylactic field worker is conferring a favor upon his operative colleagues by educating the public to a point where the necessary operative work which is now neglected by 90 per cent. of our people will be done. This new step, Dentistry's latest phase, only represents the applying of sanitation in the dental field, which field in this respect is the most sadly neglected, up to now, of any on the face of the earth.

RIED CORNER.

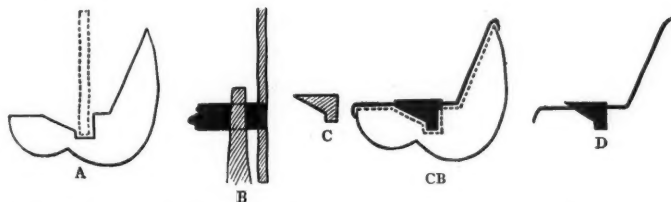
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"Oh, if I could only go South, if only to escape March!" said an anemic woman shivering in the wind. If she walked four or five miles a day in the open air, she would cease to shiver.—*Selected.*

## A QUICK METHOD OF MAKING A BACKING FOR A STEELE POSTERIOR

BY LOUIS SIEGAL, D.D.S., HARTFORD, CONN.

This method may not be new to many, but there are hundreds of dentists in out-of-the-way places who would appreciate knowing how to make a gold backing for a Steele posterior in a pinch, and at one third the usual expense. In addition you have a practically one-piece boxed in backing ready in a few moments for soldering.



A—Wire fitted to pin opening. B—Gold fitted to wire. C—A pin after fitting to tooth.  
CB —Readapting backing. D—Finished piece

(1) Insert a wire, in round opening of the Steele posterior facing, slightly smaller than the size of the hole. Illustration (A).

(2) With a pair of flat nose pliers, fit a piece of pure gold around the wire, then cut off flat end of gold at an angle of about forty-five degrees to the tubular end and fit the pin just made to the tooth. Cut same until about one sixteenth of an inch protrudes above the porcelain. Fill tubular end with solder.

(3) Adapt a piece of pure gold to the Steele posterior, burnishing the same into the pin opening of the tooth. Remove and cut away part burnished in the opening, force pin through, remove and solder. If the pin is made a trifle large the opening in facing may be enlarged with a suitable stone.

### STOPPING A TOOTHACHE

First dry cavity with cotton. Do not use air. Remove débris from cavity. Dip a piece of cotton in chloroform and place in cavity. Place another dry piece of cotton over this. If relief is not felt in a reasonable time, place another piece of cotton dipped in chloroform in cavity. After pain has subsided, dry cavity, place a piece of cotton dipped in eugenol in cavity and over this cotton dipped in sandarac varnish. After twenty-four hours, proceed to devitalize.—*L. Melville Shalit, D.D.S., Atlantic, Mass.*

## THE STORY OF PRIVATE "G"

BY MIRIAM TEICHNER, NEW YORK

He was tall and straight and stalwart; he was mighty good to see;  
He was going to the border, was handsome Private "G."  
He was thrilling with excitement, and his mind was all aflame  
With the thought of deeds of valor that would glorify his name.

But when he reached the border, it was blooming beastly hot;  
There were things that crawled and wriggled. Could he catch  
them? He could not.  
And he sizzled in the sun and thought he knew what hell was like;  
But he didn't—till they took him for a little four days' hike.

Now Private "G." was husky, and he tried to shift his load  
And he wobbled and he staggered, and—he fell beside the road!  
And it wasn't drougt nor sunstroke, and it wasn't lack of pep  
That bleached him through his sunburn and made him drag his  
step.

He was fit except for something that had happened to his jaws,  
And that kept right on a-happening, without a second's pause.  
A fiend with red hot hammers was pounding with a vim  
Upon a throbbing molar, and his strength was fierce and grim.

And a thousand little demons with tomahawks and saws  
Were doing excavating in that poor young private's jaws.  
Till he had the fighting spirit of the insect called a louse  
And defeat had crowned his efforts if he'd had to fight a mouse.

And a score or more of privates that very self-same day  
Were stricken out of service in that very self-same way,  
And Uncle Sammy's dentists—for some one's plans had slipped—  
Were plenty strong in numbers, but were wholly unequipped.

Well—the soldiers weren't needed; it was nothing but a hike,  
There wasn't any fighting; just a tramping down the pike.  
No, they didn't need the soldiers whose teeth had gone so bad.  
No, they didn't need those soldiers—but just suppose they had!



BY C. J. HOLLISTER, D.D.S., PHILADELPHIA, PA.

ON A FOUR-DAY HIKE

THIRD PAPER

"We are going on a four-day hike, would you like to go?"

In this form came the question from Colonel George Kemp of the Third Pennsylvania Infantry. As I had reason to think that no dentist had ever accompanied an army on a march, and as the experience was sure to prove interesting and instructive, I gladly assented and made the necessary preparations. A foot engine, a student's case of instruments, and a folding chair were packed in one of the hospital wagons to accompany the troop. I was given a horse, and in my saddle bags carried instruments and medicines likely to prove necessary in emergency work, such as forceps, elevators, oil of cloves, and tincture of iodine.

Equipped as for war, the division, comprising 12,000 men, left Camp Stewart at 8 A.M. Monday, Sept. 25th, and marched via El Paso into the valley of the Rio Grande. The men were fresh, there was plenty of water, and the march was not especially difficult. During this day there was very little demand for my services.

We camped on the banks of the Rio Grande, and fifteen minutes after the men broke ranks they had transformed the shallow, muddy river into an active resemblance of the crowded beach at Atlantic City, the chief difference being the total absence of bathing suits and of the pier. Fully 9,000 men were romping in the water and refreshing themselves after the toil and fatigue of the day.

As soon as convenient after camp was fixed, my chair was set up and I was called upon to extract several abscessed teeth and to relieve toothaches from exposed pulps. This kept me busy until about 10 o'clock that night when I rolled into my blanket and with the sky for a roof, fell into a sound sleep, having been very much predisposed thereto by the long

Dentists who wish a reprint of this series of articles can secure it free by sending a 2c. stamp for postage to THE DENTAL DIGEST.



"I was given a horse, and in my saddle bags carried instruments and medicine likely to prove necessary"

hours of marching and work, and a day on horseback, to which I was not accustomed.

It seemed to me that I had hardly fallen asleep, when I was awakened by a trooper who presented a badly swollen face. I found that it was 4 A.M. and that I had had 6 hours of unbroken rest, quite a luxury in my experience with the troops.

No other remedy was available in this case except extraction, and I had not finished serving him when others presented. For 3 hours I was as busy as one could be, extracting abscessed teeth and quieting toothaches. The exercise and the fatigue of the day, the plunge into the water, even though it was warm, and the sleeping on the ground had started many dormant pathological conditions into action and teeth which had given comparatively little trouble developed into toothache or an active abscess.

The second day of the hike led us through a desert where sand was ankle deep, and water, in the quantity required for 12,000 men, was entirely unknown. The wagon trains were stalled soon after reaching the sand, our throats were parched, our lips swelled and cracked, and our faces burned as the results of thirst, heat, and dust. Many of the men dropped by the roadside because of blistered feet, and the general physical misery was distressing not only to experience but to witness. It does not require much imagination to see that 12,000 men marching through a country of this sort, accompanied by horses and wagon trains, raise a tremendous dust which must be breathed by all and which, in the absence of plenty of water, immediately induces severe discomfort.

During the second day I was called upon almost continuously to



give relief to toothaches from exposed pulps, and in a few instances to give a general first aid treatment to sufferers.

Night fell with the wagon trains still behind, and indeed it was 11:30 P.M. before they reached camp. Midnight passed before the boys got anything to eat, and even then they received only a scant portion of black coffee and some hardtack. The night was cold and we all worked in relays keeping up great fires of sage brush and cactus.

My chair was not set up this night, but quite a number of cases presented for extraction, and I was compelled to use my left arm as a head rest.

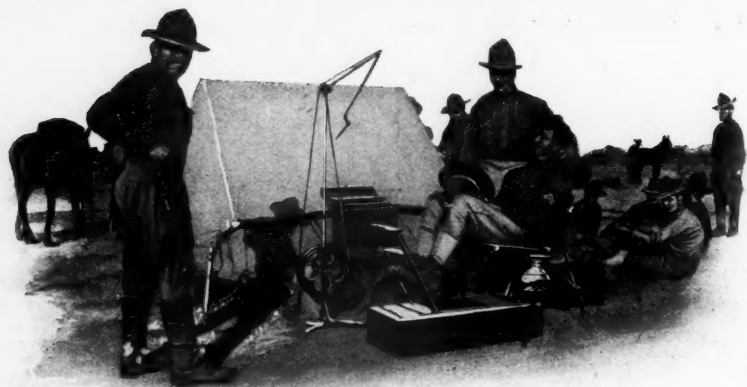
It was but natural that the day of fatigue, hunger, and thirst and a night of hunger and broken rest should not have put us into the best possible condition for the hike on the third day, but we were beginning to "come back," and started in good spirits.

Our march on this day led us through a mountain pass, and profiting by the experience of the day and night before, the wagon train was sent out ahead of the troops, so that if the wagons were stalled the boys could help them. The wisdom of this action was soon vindicated, and several times before we were over the mountain it was necessary for the boys to put their shoulders to the wheels on hard grades. At 4 o'clock we camped near a large ranch and both men and animals were able to obtain plenty of water.

This night proved to be, for me personally, the hardest of the hike,



"At ten that night I rolled into my blanket and with the sky for a roof,  
fell into a sound sleep"



"My chair was set up and quite a number of cases presented for extraction"

for I was kept busy all night long relieving aches and extracting teeth. A little night service in a modern electrically equipped and steam heated office presents only professional difficulties, but all-night service on the prairies or in the mountains, with only the blue sky as a ceiling and a flickering oil lantern for illumination, and with the resources of marching equipment, is a very different thing.

About 7:30 A.M. the others "broke camp," and I stopped work, and we started on the last 15 miles of the hike. The road was hard and level, and marching 50 minutes and resting 10 minutes of every hour, with a half hour rest at noon, we came in sight of Camp Stewart about 2 P.M. I didn't know how attractive it was until I saw it in the light of this new experience. A shower bath and the use of a razor confirmed my impression. I had not had my clothes off in four days.

As the result of this experience, several things stand out very clearly in my mind and can be confirmed by any dentist, dental organization or by the government merely by sending a dentist on the march with troops.

The first of these convictions is that there is always a large number of men whose mouths present quiescent pathological conditions which are liable to spring into active eruption as a result of conditions unavoidable on a march. Dormant abscesses become severely acute; exposed or nearly exposed pulps ache violently, and indigestion which may have slumbered, breaks into active eruption.

These conditions are evidenced by the fact that on this four-day hike I extracted 35 teeth, practically all in conditions of acute abscess, and relieved more than 100 violent toothaches.

Only a slight familiarity with either a violent abscess or a violent toothache is required to show that the man who is suffering from either is physically incapacitated for any service, no matter how necessary or important it may be. He is in such misery that he can think of nothing else, and he can do only those things which are necessary for his comfort. Not only is he incapacitated for service, but he becomes an actual drag upon his organization, as every man on the march who is not able to do at least his full share must be. During this one hike of not more than 70 miles, 135 men were absolutely incapacitated and but for the possibility of obtaining immediate dental service and relief, would have been incapacitated through the remainder of the march from the time when the attack began. If this condition obtained in a four-day march in times of peace what might one expect when the hardships of war, of fighting, and of exposure were added to the daily routine. It is no wonder that in the Boer war three English soldiers were invalided for dental troubles for every five killed.

I am convinced that only colossal ignorance and gross incompetence permit the assembling of even a militia organization without adequate provision having been made for the care of the teeth. I have it upon excellent authority that when the German Armies began their march westward, each division was accompanied by a completely equipped motor dental ambulance, and that the greatest care and attention were exercised to make sure that soldiers were not incapacitated by dental troubles. I am informed that these motor ambulances have very much more than justified the trouble and expense incurred in preparing them.

In addition to the number of men who are incapacitated for service by attacks of acute abscess or pulpitis, a large number of men are always



An "Emergency" Service on the hike

suffering from latent indigestion, arising very frequently from conditions in the mouth. It requires but little to carry these men from the latent to the active stage and they are then physically incapacitated, in whole or in part, by attacks of acute indigestion, which are usually blamed upon the food or the water. My own experience convinced me that these attacks are due to food and water in very much less degree than is usually believed; that they are largely due to pathological conditions in the mouth and that when these conditions in the mouth are normal, fewer men are affected by changes in food and water than was formerly the case.

We are neither slaves nor servants in this country. Each man feels his responsibility to support the government in time of need, but he also feels the responsibility of the government to support him in time of need, and this preparation can come only from intelligent, adequate detailed preparation long in advance of the crisis which develops the need.

Among those forms of attention required, by no means the least is intelligent, adequate, detailed and constant care of the teeth of the militia in time of peace that they may be ready in time of war.

*(To be continued)*

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## ONE STEP METHOD OF LOWER COMPOUND IMPRESSION

BY H. C. WERTS, D.D.S., BEAVER FALLS, PA.

A great deal has appeared in the journals recently in regard to compound impressions. After three years' experience with this material the writer is thoroughly convinced it is the material for taking impressions for the making of artificial teeth.

The technic of compound impressions has been rather complicated. The lower denture is usually the stumbling block. Advanced compound technic has in a measure removed that stumbling block.

About a year ago the writer conceived the idea that lower compound impressions could be satisfactorily taken in one step. The technic is as follows. Kerr compound is used. The softening of the compound is controlled by the use of the Supplee compound heater and a pan of ice water. The Supplee occlusal plane tray is used. The water is heated to 170 degrees. The upper trial plate or teeth must be in position in the patient's mouth. The occlusal plane tray is adjusted to the conditions in the mouth, care taken that it is not too long, and that it rests firmly

against the occlusal surface of the upper trial plate or teeth. The patient's lips are coated with vaseline so that the soft compound will not stick to them when entering the mouth. Occlusal plane tray is laid on the table reverse side up, care being taken that it is perfectly dry, otherwise compound will not stick to it.

Sufficient compound for entire impression is softened in the water, the amount of compound used depending upon the resorption. Compound is formed in a roll of proper length, passed over Bunsen flame and stuck to tray. Small Bunsen is used with flame about one inch in length. With the compound on the tray, the tray only is held in the ice water to harden or chill the compound next to it. This gives the compound three strata of temperatures, rather hard next the tray, then comes a layer of gummy consistency, the part to be placed next the ridge is very soft. The tray is held in the fingers or with the lower tray holder. The compound to come into contact with the ridge is thoroughly softened by holding or passing over the flame, special care taken that the posterior part of the impression is very soft. Dip the compound that is to come into contact with the ridge in the warm water for a few seconds to equalize the heat so that it will not burn the patient, place in patient's mouth, locate on ridge, slightly place to position. The patient is now instructed to bring the lips together and swallow, give the lip movements, then to rest about one half minute and swallow again. The compound still being a little soft the lingual muscles may draw it from the ridge, therefore after a second rest of about three fourths of a minute the patient is instructed to swallow the third time. Chill the impression with ice water and remove from the mouth. Trim about  $\frac{1}{16}$  of an inch from the inferior or lingual rim of the impression, as the lingual muscles are rather weak and do not trim as well as the buccal muscles.

The most important points in this technic are to use sufficient compound, especially in the molar region; if too much is used the buccal muscles will throw it over the buccal surface of the upper plate. Use ice water to harden the compound next to the tray, otherwise the patient may bite the tray through the compound against the ridge, especially patients who have been without teeth for some time, and in these cases you could get no results at all. Be sure the compound placed next the ridge is very soft, especially over the molar region and along the lingual. The writer has been using this one step method for over eight months in every lower case. It does not consume any more time than plaster, is less difficult, and the results are greatly superior. As a dentist who has been in practice since 1872 remarked, "Plaster is compared to compound for impression taking as the bow and arrow is compared to our late model rifles."

# ORTHODONTIA

## SCIENTIFIC VERSUS UNSCIENTIFIC ORTHODONTIA

BY FREDERICK LESTER STANTON, D.D.S., NEW YORK CITY, N. Y.

### SECOND PAPER

The visual observation of the most capable living orthodontist, the usual forms of measurements of models and the comparison of models with forms of arch supposed to be common to great numbers of cases, are of little value as guides to procedure in the practice of orthodontia. Indeed they are quite as likely to mislead as to lead correctly.

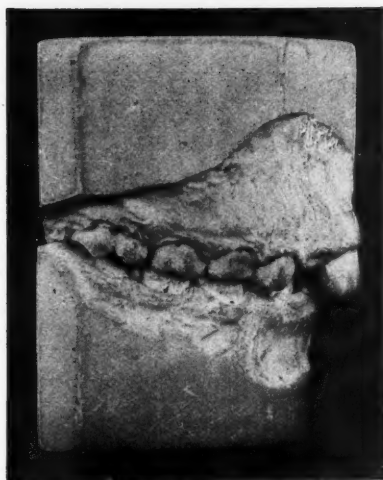
Figures 1A and 1B show upper and lower models from one mouth which have been submitted to a large number of capable orthodontists for diagnosis by the methods common to their practice. All have recognized that the arches are too narrow to afford room for all the teeth in good alignment and that the relations of the lower teeth on the right side to their opponents are mesio-distally incorrect.

All have prescribed the same treatment, the application of appliances to widen both halves of both arches until the anteriors were accommodated in the tooth rows and the correction of the mesio-distal mal-relation was secured. None could give the exact forms the finished arches would exhibit, and none had any guide by which to tell when the work was finished except seeing the anteriors fall into line.

An engineering survey, Figures 2A and B of this case shows that both halves of the upper arch need spreading, but that only one half of the lower needs to be spread; that is, the teeth on the right side of the lower arch are already far enough from the median line, but those in the left side need to be moved farther from the median line. The first lower deciduous molar on the right side needs to be moved nearly straight forward into correct mesio-distal relations with the uppers as shown by Figure 3A; spreading this side would be fatal to the establishment of normal occlusion in this mouth.

Figures 4A and 4B show the upper and lower arches after one treatment along lines indicated in the engineering survey, by the application of a single appliance to the posteriors for a period of about five months.

*(Text matter continued on page 162)*

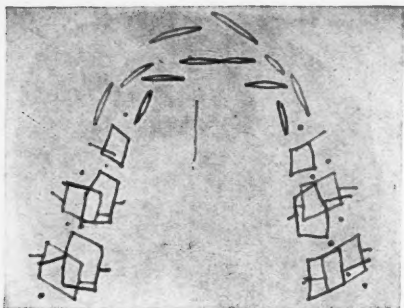


**Fig. 1A**  
Complete distal occlusion of lowers



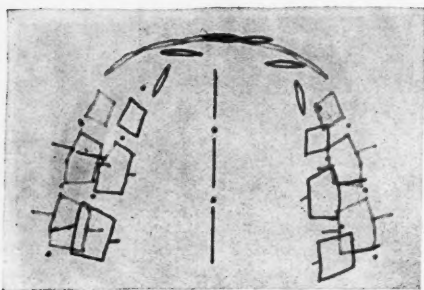
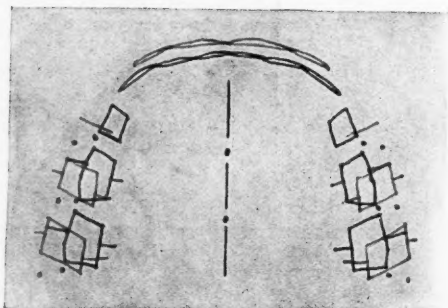
**Fig. 1B**  
Occlusal views of models. Black dots show the points surveyed



**Fig. 2A**

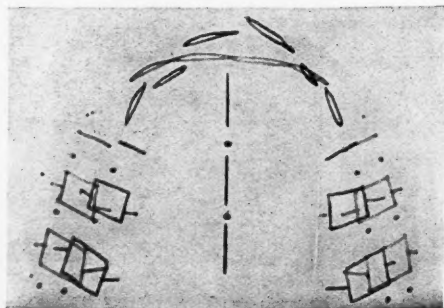
A map of the model shown in Fig. 1. Lower jaw—heavy black lines. Upper jaw—light lines. Points surveyed; Molar cusps, contact points, Incisal edges

**Fig. 2B**  
A map showing how the teeth will look in occlusion

**Fig. 3A**

Showing movements necessary in lower jaw. Dark lines show positions of teeth in malocclusion. Light lines, proposed positions

**Fig. 3B**  
Showing movements necessary on upper jaw. Dark lines show malocclusion. Light lines, proposed positions

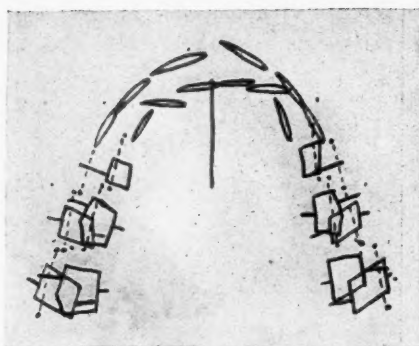




**Fig. 4A.** Showing the same case 5 months after appliances had been placed. Mesio-distal relations corrected without use of intermaxillary elastics and no change in the form of appliance, which was designed by Mr. G. D. Fish, C.E. Appliance placed and removed by Dr. T. F. Cloney



**Fig. 4B.** Showing occlusal view of mouth shown in Fig. 4A. No appliance has been near the incisors. Compare with Fig. 1B on page 159

**Fig. 5**

Survey of models shown in Fig. 4A and B. Lower dark, upper light. Compare with Fig. 2A the survey of original and note how the median line has shifted. Mesio-distal relation on right side corrected. No expansion on lower right as planned, simply a forward movement

**Fig. 6 A**

Two views of a model. This case has been completed. The upper jaw was under retention. Bands on first molars with buccal tubes. A labial expansion arch was pressing on rotated upper central. See figure 6B on page 163

Figure 4 (page 161) is offered as evidence that the methods of diagnosis common to the practice of orthodontia are unscientific, incomplete, and often misleading. Figure 5 shows a map of the upper and lower shown in 4A and B.

Figure No. 6 shows views of a case which a prominent orthodontist had "regulated" for several years. The work was supposed to be finished with the exception of a few finishing touches to be applied to an

*(Text matter continued on page 164)*



Fig. 6B

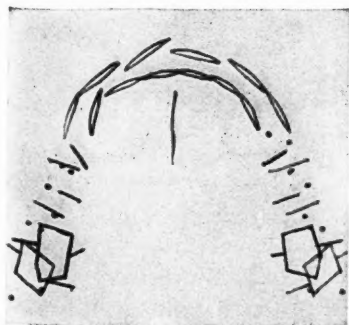


Fig. 7A

Survey of model shown in Fig. 6. Dark lines lower. Light lines upper

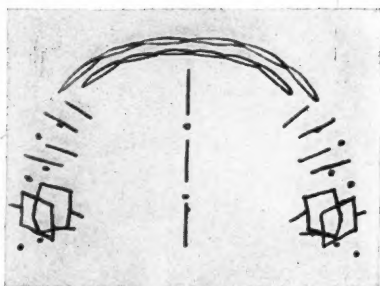


Fig. 7B

A map of occlusion showing how the teeth of this patient should have been occluded

upper central which would not align itself correctly. For two years he had pushed at this central in the effort to align it, but without success.

An engineering survey of the case showed that the trouble in aligning the central did not arise in the central, but in the fact that the only forms of the arches which would affect normal occlusion had not even been suspected, and the upper arch was 6 mm too narrow at the bicuspid (see Figure 7A.) The central was being pushed out of alignment by forces not perceptible to the orthodontist and he might have pushed it as long as he and the patient lived, without the slightest hope of success.

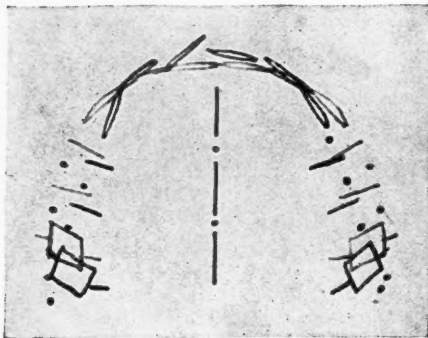


Fig. 8A

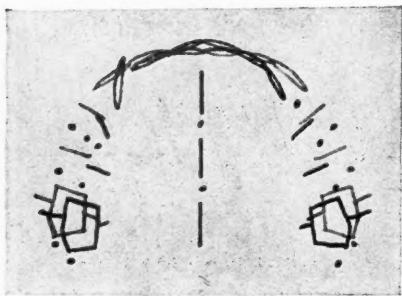


Fig. 8B

Figure 8A shows a map of the uppers contrasted with the positions in which they should be placed. You will note lack of expansion in bicuspid region and rotation of cuspid and molars.

Figure 8B presents a map of lowers contrasted with the positions in which they should have been placed. Note pronounced rotation of the left cuspid.

## CORRESPONDENCE

*Editor DENTAL DIGEST:*

The article, "Are State Laws Reasonable," hit the nail squarely on the head. It set me to meditating and more so, when a young man from one of the Western states was home on a visit and came to me for an appointment and asked me this question: "What is the matter with the dentists and your dental laws?" When the laity sits up and takes notice, isn't it about time the profession at large should take action and come to the rescue? He told me of many places where dentists were sadly needed to relieve the suffering. I explained to him the defects of our state laws restricting good men in entering his field.

It was my good fortune some time ago to sit in a state convention and listen to a fellow practitioner give a paper on a live topic. He completely captivated his audience with his masterly paper and all present agreed it was the most educational one on the program. He was a graduate from the school of "Hard Knocks." In his earlier career he passed with high standings before a State Board. He was required to support the family, father dead and being the oldest child, also to extend a helping hand to a brother who was attending a dental college: to-day he is by far the better dentist of the two in every department of dentistry. Let credit fall where it is due. Don't you think it would be almost criminal to pass a national law excluding such worthy young men as he, who are most capable of relieving suffering humanity with intelligence and skill? If any ethical dentist who contemplates moving to some other state, it is often for his family interest or because he has given his best efforts to his patients, thereby sacrificing his health for the cause. We hear and read so much about efficiency at the present time, then why not be alert and recognize it instead of strangling it?

Are we not trying to extend Oral Hygiene to every nook and corner of the United States? Again we are curbed by the state laws not allowing members of the profession to preach it or go wherever they can serve the people the best. The laws on the state books are made for the dentists instead of the people. With the call of the profession to the Army and Navy service fewer are left to care for the people at home. We all know the ration of work done is comparatively small to the amount needed.

Why disbar a Lincoln from the presidency, when he can deliver the goods, because he hasn't been college bred? Why not disbar Mr. Edison from the field of invention and confine his efforts to his home state? Hasn't he given us at the chair within finger tips many appliances possible to execute our work more thoroughly by simply pressing

the button? Would you think of holding the law on him because he was from the university of Hard Knocks? No! Emphatically, no. Any state would welcome with open arms with a bonus to come. If he would withdraw his inventions from the profession what a howl would go up from coast to coast. We wouldn't think of curtailing the manufacturer to one state. We are not so broad as he.

Did you ever hear of one from the old school who is an advertiser? No. Who adheres to the code of the code of ethics closer than he? Why brush him aside? Doesn't the constitution say we are born free and equal? Again, isn't it supposed to be a free country? Is it? He has walked up and down the path of life on green carpet giving valuable service to the crying needs of humanity. When it is all done he can say "well done thou good and faithful servant; I have fought a square fight." Don't you think it selfish not to permit dentists who have a diploma from their respective State Boards to go to any state and fulfill their mission in life? Why give them the right and turn around and disfranchise that right? Place yourself in the same position and what say you? Wherever he goes you will find him a willing worker in civic improvements and his judgment is sought after. A rising vote of the profession would say, admit him. Have you not gone to his office in search of knowledge during your college course when stalled on some piece of work? Wasn't he always willing to stop his "Lab" work and assist you? About the first thing you did on returning from school on your vacation was to go again after more of the practical knowledge that cost him so many years to acquire. Why this discrimination and selfishness in state lines? As I understand it, this is supposed to be one big fraternity and should inject a little serum of fraternalism into certain sections instead of allowing senile decay to step in. "Think of others first, yourself afterward." We should be more considerate toward the less fortunate brother who is helping to make dentistry better and better dentistry.

I have practised at the chair sixteen years and the more I am there the more I realize the injustice of the dental laws. If a man can become a better dentist on one side of the line than another, why restrict him? In my opinion if a dentist has practised five years and been a member of his state and local society, the State Board from his home state knows more about the fitness of the man than the state which he wishes to enter because they are in closer touch with him. Who of us would not rather move if required to than to accept charity? Give us the right, then less need for large pension fund. Sum it all up and you can answer it very readily by the dictates of your own conscience.

All has been said thoughtfully with due regards to our universities



and energetic faculties, they are doing a noble work in the advancement for dentistry.

C. S.

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### A PRISONER IN INDIANA

#### *Editor DENTAL DIGEST:*

The article in the November DIGEST entitled, "Are State Dental Laws Reasonable" is the best, most sensible I ever read. It suits me exactly and I should like to meet the writer.

I am a 20 years dentist—in Indiana—and it's as a jail to me. I am good in Indiana only, but each summer I have wanted two months off on a vacation to Michigan Lakes (some summer resort) and take along a light weight dental outfit (costs nothing to take) and try my luck, maybe make expenses, anyhow. But no, the law says "no" I am a good Indiana dentist but Michigan says "I am from Missouri." \$25 Ex. fee, \$25 carfare, hotels, a week's loss of time to prove to Michigan I am a dentist and even then likely to fail to prove it on some little point.

In the past 20 years I have wanted to try some new Western state or territory they were booming, had no dental colleges and few dentists as it seemed, but no, again the laws are rigid. As the years go by the less likely a D.D.S can go to a new state and meet the conditions. Indiana says I am a good, decent, law-abiding citizen, I am called "Doctor" and respected. Indiana says I am a dentist, but not one other of the 47 states will call me a dentist and let me try dental practice. In any one of the 47 if I violate the *law*, I am arrested, fined, maybe jailed; at least I am an outlaw, a rascal and have no right there, so all those dentists in that state say, and will fight me tooth and toe nail if I try to do any dental work. Yet 48 states under the *flag*—it doesn't seem to me there's a bit of justice in the dental laws. Can I "fix" a tooth in Indiana? Indiana says "yes." Can I in any other state? "No!" There you are, and what are you going to do about it? Stay in Indiana, you say, or the law says, and that's just what I am doing. Indiana is a jail to any dentist who wants to cross *over*. He dare not.

Now, Mister Editor, read this article over twice; even give it a third reading, think it over just a bit. Print all of it or none of it and if printed put my name and address if you desire to. But I'll say to you, the Article on State Laws is the best I ever read. You hit the spot that covers more than anything you ever published in your magazine. It's worth \$5 or \$10 to see it in print. I would like to meet the writer, and let me say you keep just such articles in each DIGEST, we want them,

and you will get letters like I am sending you. That letter alone has made me a lifetime DENTAL DIGEST subscriber. No other journal ever did as you have done; just throw down the cold hard facts that we dentists are up against all the time. No doubt they had the chance, time and again, but were afraid or thought it not worth while to do it. **More letters on State Dental Laws Are Wanted.**

B.\*

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### CAN YOU ANSWER THIS?

Patient, male, about 55 years of age, left upper first molar filled; has large occlusal filling devitalized. For eight years caused no pain, patient states. January 2d came to know what trouble was, no canal points used, just a paste of some form was found in canals. When applying pressure on buccal side caused intense pain in optical region of the lingual root. Removed filling, cleaned canals, applied tincture of iodine on gums in region most painful, dismissed patient for 48 hours said he had great relief. No pain was felt by applying pressure on lingual side, only on buccal. What was the cause of the above?

Patient, 38 years, male. First lower right molar was devitalized by other dentist, patient came to me with part of filling out, roots filled; found a sinus leading to gum; could pass a probe to distal root through process; no flow of pus but found a granular substance at the opening like bony tissue. Treated, same opening will close for a few days then it opens again. No pain: What shall I do to close the opening?

How differentiate between gum tissue and tissue growths through apical region occupying pulp chains known as polypus of the pulp. What is your treatment?

How determine a blind abscess without the use of X-ray for diagnosis?

What is your treatment for glistening tumors of the gum?

Child  $6\frac{1}{2}$  years of age no six-year molars present. Why so late? All deciduous teeth present, two molars decayed, large cavities, rather sound enamel on deciduous teeth.

Is it advisable to crown six-year molars when you are called upon to devitalize?

How differentiate between a case of pyorrheas present and ulcerative mucous membrane?

C. K.

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\*Name given on request.

## OFFICE EXPERIENCES

[I shall be glad to have Experiences from dentists for this department, and for each experience accepted for publication, the *DIGEST* will send the writer a cheque for \$2.00. The articles need not be lengthy. EDITOR.]

### WAS IT FRIGHT OR IMAGINATION?

A young man twenty-two or twenty-three years of age came in to have upper central repaired. Case was of extensive decay and needed nerve treatment and removal. I gave him treatment to kill nerve and instructed him to return in forty-eight hours. He came at appointed time and I proceeded and cleared the field for nerve removal. My assistant handed me a large piece of rubber dam and as I started to place it over the mouth the patient raised his hand, stopped me and said.

"Don't give me any gas, doctor; I don't want it."

I said, "Very well; this is not a gas inhaler, I am simply going to fasten this rubber on the teeth to keep them dry."

I proceeded and had not finished getting it in place before he was unconscious and remained so for about two minutes or so—then became conscious and said:

"I told you not to give me gas."

I told him what I had done and thereafter proceeded without further trouble.

Did he faint from fright or did imagination put him away?

D. E.

### EXPERIENCE WITH A POKER PLAYER

I rendered-services to a married woman living in the neighborhood and on the first of following month sent a bill to her husband for \$15. Shortly afterward in passing their apartment I noticed the flat was empty and learned upon inquiry that they had moved out in the night, left the city, and returned the key to the landlord by mail without paying the rent. From the men who moved the furniture I obtained their address in B— and to their address sent another bill. In addition, I learned that the husband was a poker player and that I probably would not be paid.

However, he replied to my second bill saying that since arriving in B— three of my fillings had fallen out and that his wife had to go to another dentist and have them replaced, and if I would accept \$10 in full payment he would send me a check.

I was advised to accept his offer, as ten dollars was better than nothing and I would be lucky to get anything at all from him. But I argued that to do so would be virtually an admission that my work was faulty and I knew it.

So I wrote him that I prided myself on good work and that I was sure the fillings I inserted in his wife's mouth were so placed they could not have come out in so short a time: that if any fillings had fallen out they were not mine but some other: that I would not expect him to take my word for it and I declined to accept his. Furthermore, that if he would send me the name and address of the B— dentist I would send the doctor a chart showing the fillings I inserted in the wife's teeth and that I would deduct from the bill the charges made for any such fillings as the dentist told me he had to replace.

I received a check in full by return mail and felt satisfied that I had called his bluff.

K. U.

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### "ABOUT SO MUCH"

BY A SUBSCRIBER

A gentleman came in to see me about having a small amount of dental work done, and he asked me what the bill would be. I said unto him, "It will be *about* eight dollars or ten dollars"; he looked up at me and said, "Which will it be, eight dollars or ten dollars?" This has taught me to be definite, and it shows how this gentleman brought the proposition to a focus.

The second experience is as follows:

I was doing some crown and bridge work for a gentleman who was quite a good business man, and very definite in his dealings, and at the next to the last sitting he said to me:

"If you will tell me what the bill will be I will bring you a check next time." I said to him "the bill will be about sixty-four dollars"; he looked up at me and the only thing he said was:

"*About*"? Then I said "sixty-five." So that taught me when a patient asks me what the bill will be to state definitely, without any preliminaries, or explanations or ands or ifs, but to state the amount exactly without anything before or after it, in other words if the bill is \$75 to say \$75 and nothing else.

## EXCUSES FOR NON-PAYMENT

BY G. O. B., NEW YORK, N. Y.

When I read your notice of the new Department to be entitled "Office Experiences," in THE DENTAL DIGEST, there immediately came into my mind not one experience only but a whole series of experiences in connection with the payments of patients' accounts. Those which have made the deepest impression on my mind have been in connection with the excuses made by different patients for not paying bills when due, or for the reduction of fees. By way of comparison of experiences with other dentists, I have collected a few which I have heard recently, as follows:

First of all, at this season of the year, comes the patient who wants to have just enough work done not to require the payment of the bill in full and then postpone the completion of the work until sometime early in the year. It is customary for this sort of patient to go as far as he or she thinks safe and then say, "Doctor, I shall not be able to have my work completed until after Christmas," intimating thereby that she will not be able to pay the bill until the work is completed, which will be sometime in the spring. By this means patients seek to secure the major part of the necessary work and delay the payment several months.

Two other excuses are enough alike to be grouped together. One of them is, "Just fix the front teeth, the back teeth don't show." The other is, "Just fix the tooth that hurts, I'll let the others go until some other time."

A mother recently brought in two children who were comfortably though not extravagantly dressed and asked to have some work done to relieve pain. The six-year molars were found to be so far decayed that exposures of the pulp were likely to result soon, and the condition and the necessity for attending to it were carefully explained to her. She replied: "Oh, I guess it's all right to take care of the teeth and to stop their aching, but I must get the children some more clothes first. As soon as I get their clothes properly fixed up, I'll have their teeth attended to."

One of my patients who takes a vacation in the fall, agreed to pay for dental service at the rate of so much per month. When the time for the vacation came, he visited the office on the day of the month appointed for payment and instead of offering to pay the amount agreed upon at that time, said: "Doctor, we are going on a vacation this month, and it will use up all of our money, so that I cannot pay my regular installment upon my dental bill." He seemed to think that he was per-

fectly justified in expecting me to pay at least a portion of his vacation expense.

There are of course worthy excuses, such as was offered by a patient who came in and said, "I shall be delayed with the payment due you this month. It was necessary to send my wife to the hospital for an operation which proved very expensive."

I don't mind paying my own election bets, but I dislike paying bets lost by others. One of my patients, had purchased bridges with the agreement that he would pay in November. When November came he slipped in and said, "Doctor, I can't pay for that bridge. I lost the \$51 on the election and as soon as I win something I will pay you."

Every once in a while I meet those who feel that we owe them something as was recently expressed by a mother whose work I have done, at reasonable fees. Quite a little work was necessary in the mouth of one of the children and when I gave her an estimate, she exclaimed, "I have spent quite a lot of money with you and I think you should not charge for work on the children's teeth."

These experiences are evidences that a great deal needs to be done in the way of educating the public to a proper understanding of the value of our services and the necessity for paying the bills with at least reasonable promptness.

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### CAN YOU HELP MY HAND?

*Editor DENTAL DIGEST:*

I have a very disagreeable trouble with my right hand continually chapping and peeling up; this is both winter and summer that it is cracking and peeling. Have tried every available local means and am actually ashamed for my assistant to see it and if it continues to worry and grow worse will eventually have to give up practice. Will some one be kind enough to give me through the columns of the *DIGEST* a cure or a remedy that will render it more healthy?

F. L. H.

One of the finest things I ever used is *Velogen* (Van Horn and Sawtelle, New York City)—hands must be well washed before application. It will certainly help. I use nothing else.

C. E.

# DIETETICS AND HEALTH

## PREVENTION OF, AND IMMUNITY TO, DENTAL DISEASES\*

By C. B. BRANSON, D.D.S., SEATTLE, WASH.

From the earliest reported records of dentistry five thousand years ago, the Egyptians' foremost thought was along the line of prevention of dental caries. From that time to the present the ideal of prevention has been uppermost in all writings throughout the ages. To-day the verdict of science, after most exhaustive research, is that while much is known concerning this subject, little is understood. Miller, in the last year of his work, expressed the universal sentiment when he said "I can see how caries occurs but not why." Pickerill's investigation, so thorough in considering every tangible factor pertaining to the teeth, mouth, and saliva, seems to have summed up all previous knowledge of dental investigations, and added much in the way of valuable suggestions as to prevention and education along the lines of the care of the teeth; but his conclusions fail to reveal the cause of immunity or how it can be produced.

Recent developments have disclosed that dental diseases are responsible for an alarming number of systemic disorders of the most serious nature, and we are aware, as never before, of the great responsibility that rests with us. Dr. Mayo has stated that medicine is at a halt; that the next step in preventive medicine must be taken by the dentist. He asks,—Will they do it? There is a call for volunteers that we cannot ignore. We must work out the solution of disease within our field, not only for the sake of the usefulness of the teeth, the comfort of the patient, but the health itself is at stake. Our opportunity is thrust upon us, and the possibilities to mankind are unlimited, if a practical solution is found.

In the tangle of theories, investigation, and evidence at hand, we are left in a maze of perplexity as to the course of investigation remaining to pursue. Theories have fallen before facts that have bewildered science again and again. Head, in his experimentations, found that a tooth so softened by a weak lactic acid solution that it could be cut with a knife,

\*Read before the King County Dental Society, Seattle, Jan. 2.



on immersion again in living saliva returned to its original hardness. He said,—“I cannot explain it, I am simply dumfounded.”

There is so much knowledge with so little understanding of a practical nature, that it appears that the underlying principle must be lacking, for there is a solution to every worldly problem, when once the key to it is found. It seems strange that practically all scientific investigation and study along the lines of dental diseases has been directed at the mouth alone as a local condition only to be examined and treated along mechanical and medicinal man-made principles, instead of considering Nature in the matter, her power to construct, as well as destroy, not locally alone but systemically, at the same time. No disease can be entirely local within the limits of the body without its affecting the whole. In studying a plant, the naturalist must study the soil, its environments, nutrition, development, before he can understand its physical condition, and the reason. The Government has worked out to an absolute science the balanced nutrition of plants and animals necessary to produce their maximum development, so that uniform results are assured under intelligent care and management. This has been possible only by following the laws of Nature in her application of nutrition. Any living body under analysis combines the same chemical elements as its nutrition, so to build we must furnish Nature with the required material. The study of disease is simple if we go to the roots first, and look to nutritional conditions for the cause. Complexity comes from studying the branches of ramifications without understanding the cause itself. Twenty years ago, Black wrote that the cause of immunity and susceptibility to dental caries would necessarily be found in conditions of the general system, influencing the qualities of the mixed fluid of the mouth by which the teeth are surrounded. Apparently little attention has been given to this statement, for investigation in this line has been lacking.

Science, in studying the local conditions surrounding the teeth, has not seriously considered the systemic bodily influences, the state of health of the individual, and his nutrition. In looking for immune bodies, they have tried to isolate life itself as a tangible thing to be seen with the eye. The life spark belongs to the living, not the dead. It eludes the reagents of the chemist, the microscope cannot see it, nor the X-ray penetrate it, and in the attempt to isolate it in concrete form, failure has been their reward, for science has never yet been able to explain life, which is the one close secret of Nature in which we may not share. Like electricity we may see its activities, its manifestations, its phenomena, its source and application of power, but not see it in tangible form. If we consider this fact and study Nature's laws and principles, she unfolds to us her secrets, the secrets of health and its immunity from disease.

One hundred years ago, Fox, in writing on the subject of prevention of caries, said,—“This delightful secret we can only expect to acquire when the philosophers’ stone and the great panacea have been obtained.” In this prophesy there may be more truth than would appear at first thought, for in the past consideration of dental caries, as a disease in itself, some very vital factors have been almost entirely ignored, which may hold the key to the solution; namely, food as the source of life’s nutrition, its vitality and immunity, its powers for construction and destruction, not only in its application to the mouth, but to the system as well at one and the same time. We all know that the proper nutritive elements required to construct strong bodies as well as strong resisting teeth, but little is understood as to the systemic immunity necessary to protect and defend these organs once perfected, and Nature’s power to destroy them as a penalty for her violation. We have long known that food was responsible for decay: We know the class of foods that have caused destruction, but not entirely why, because the general system itself has been left unconsidered. It may appear radical to state that there is every reason to believe that dental caries as well as pyorrhea are not diseases in themselves, but the result of a food disease, malnutrition, and that these are a manifestation of bodily disintegration, to be classed and treated as such systematically as well as within the mouth.

Food scientists claim that ninety per cent. of all human ailments arise in the alimentary canal as a result of improper use of food. The most pronounced of these are rickets, scurvy, pellagra, beri-beri, and from recent developments it appears that infantile paralysis and tuberculosis also may fall under this class.

Indications all point to the fact that dental diseases are directly due to systemic lime starvation and acid waste accumulation within the body, due to the perverted and intemperate use of starch and sugar, chiefly through a one-sided diet, in which the lime elements, potash and soda are lacking; the result of ignornace, carelessness and an inclination to feel that “Where ignorance is bliss, ’tis folly to be wise” in the matter of eating tempting foods. These statements just made are not refuted by past investigators for they have not considered them in this light. Pickerill’s work substantiates these in innumerable ways, though his conclusions do not follow them at all. The investigations of all food scientists bear out these principles. The research work in plant and animal science verify them too, for it is but the penalty of Nature for the breaking of her laws; it is but the eating of the forbidden fruit, from which the beginning of man has been his downfall:—eating that which has not been earned by labor of body or mind, namely, excess of food not necessary to the bodily economy.

The solution of the problem of health for better or worse has been marked out individually since the beginning of time, to be won or lost as we cultivate or ignore our instinctive guidance in the matter. The science of producing and perfecting the physical body of man to-day is as possible as in the days of the highest development of ancient Greece, by an understanding of the dietetic problems as applied to our food to-day and its intelligent application.

This subject covers a field so broad and far-reaching in its possibilities, as applied to the future of mankind, that its importance can only be estimated by the deeper understanding of its principles. It carries us back to the very inception of life itself, for life as we understand it, is that little spark within us, embodied in the nutrition with which becomes our body. As we assist Nature in this by nourishment and care of the proper kind, just so do we become endowed with vitality and power of resistance against all disease—the power of immunity.

It is said that we are a degenerating race, physically, that we have sacrificed our health and teeth in the mad race of civilization. It so, it is because in our attempt to improve over Nature, we have ignored our instincts and have denatured ourselves. Regardless of this view, as far as degeneration is concerned, it is said that there is but one disease that can be inherited, and with this one exception, almost all infants, when they enter this world, are endowed with normal health, even when the parents themselves are in severe stages of disease, such as tuberculosis. That if such an infant is taken away from its unfavorable surroundings at once and properly nourished, it will develop into a healthy, normal individual in spite of its unfavorable birth. Such is the wise protection of Nature, who endows, with few exceptions, every living creature with a birthright of health, to be forfeited only by ignorance and disobedience of her simple law. This latter penalty has been applied almost exclusively to civilized man, through lost instinctive dietetic knowledge, which is a ruling guide in all matters in the plant and animal life. What is possible of animal development must be possible with man. But health must be built: it is not a matter of accident or chance. Civilization has been led to believe in the magic power of drop or pill to restore what years of careless living and neglect have torn down—a delusion that in the past has made physical advancement impossible, and to-day the state of health and teeth is simply appalling. We cannot help noticing the coincidence in the close relationship between these two, for the cause of both are one—a lack of nutrition. Of all the laws of Nature, this one is most violated and least understood.

*(To be continued.)*

## ANSWERS TO INQUIRIES

DR. ELDRIDGE,

DEAR DOCTOR: We dentists are often inquired of by prospective mothers for prescribed diet rich in magnesium and calcium to insure good hard teeth in the child. I am asking for such diet table, making use of the offer in the DENTAL DIGEST.

Yours truly,

K—

DR. K—

DEAR DOCTOR: Your request for information relative to proper food for prospective mothers is received.

I have never believed that prospective mothers should eat other than the regular, natural, wholesome, food provided by nature for us all.

If the pregnant woman will eat, and eat *only* those foods which the rest of us *should* eat I think her offspring will be in every way prepared for the vicissitudes of this life, in so far as it is within the sphere of a mother's prematernal diet to influence it.

By the foregoing, I mean that the mother should not eat any of the foods which have been prepared for the market by changing their natural mineral and vitamine content through chemical and other means. White flour, and polished rice are two examples of foods that should be eschewed. Refined cereals, etc., are other examples. Chemically preserved milk, chemically preserved fruits and condiments are still other examples.

Let the mother eat plenty of natural foods, that have not had their mineral content removed by artificial means. For examples—whole wheat bread and pastries; bran bread and pastries; natural brown rice; natural cereals such as wheaten grits, cracked wheat oatmeal gruel (not rolled oats); plenty of pure fresh milk, etc.

One thing the mother should not do is to eat too much sugar. If the blood is made to take up more sugar than physiological requirements necessitate, it will withdraw the calcium necessary to help it hold the sugar in solution, from the body tissues, and this same process will take place in the foetus, thereby diminishing the supply of calcium for the teeth, bones, etc.

I trust that the information you seek is here sufficiently given. If I can be of any further service please let me know.

I might add that a small portion of red meat once a day, is a very good thing for pregnant women to eat, *provided* they are not troubled with constipation.

Yours very truly

WATSON W. ELDRIDGE, M.D.

## DENTAL ECONOMICS

### NIGHT

(The Dentist Soliloquizes.)

BY MIRIAM TEICHNER, NEW YORK CITY

Darkness ahead; darkness, and mist, and cold:  
What of the night, when trembling hands can hold  
Their instruments no more, when eyes are dim;  
The worker who is done—aye, what of him?  
For such a one am I. Yes, it will come,  
This palsied age, with no snug-hoarded sum  
To cushion softly these declining years,  
And say, "Stand Back" to Night and all its fears.  
For I was one who ever feared to ask  
Right recompense for each completed task.  
Ever insistent, through my sorest need,  
That work must be above all taint of greed,  
I never learned this lesson's simple art:  
That providence and greed are far apart.  
And now the hour when shrunk hands can not hold  
Their instruments. Now comes the cheerless cold  
Where never more the rays of comfort shine.  
Darkness ahead, and ah, the fault is mine!

## ACCUMULATING A SURPLUS

G. HAROLD COLE, D.D.S., WATERTOWN, N. Y.

This most excellent article suggests a plan which can be followed with great profit by any dentist who can earn a surplus and develop the will power to invest it. Such a plan, begun early, will do away with all worries about the Pension Period of life.

It may be objected that this article contains entirely too much advertising for the bankers who sold the bonds. It does contain a good deal, but it is done entirely without their knowledge. I wish this magazine could carry so much advertising for reputable bankers and investments that dentists would invest all their surplus wisely and all be financially independent in old age.—EDITOR.

A great deal has been said in the *DIGEST* since I have been a subscriber about getting a better remuneration and how to do it, but of what use is all this information if we are going to spend it a little faster than we get it? If we get more money out of our business this year than we did last and at the end of the year we have no more to show for it than we had last, we are physically and morally worse off than we were last year.

But if we save a goodly percentage of our increase over last year's business and put it away where it will work while we sleep, then we are on the right road and, if after running the length of the road the engine quits, we have not got to sit down and wait for some good Samaritan to come along and give us a lift.

I will now give you the scheme that I have adopted for accumulating something for the time when my patients will think I am getting a little too old for up-to-date dentistry and also when I want to feel that I have not got to keep my nose on the grindstone every minute unless I want to.

When I first started in business I thought that I should put all I could afford away in the savings bank, which I did every three months. But, not having any stated amount that I had to put in, naturally I was not so particular as to how much the amount should be so long as I put something away. After two years I was married and wanted a house of my own, so I took what money I had in the savings bank and what I could borrow on my personal credit and bought a lot. Then I proceeded to borrow the money to build a house. The first year in the new house was the hardest as there were sidewalks to build and lawns to grade and many other little expenses which I had not taken into consideration but which, nevertheless, had to be met. Interest came due every six months and I had the privilege of paying what I wished on the principal. Well, the first year nothing was paid on the principal and I had to do some scrimping to make up the interest.

The next year did not require so much extra expense, so I was able



to make two fair-sized payments on the principal. The third year the interest was not quite such a burden so the payment on the principal came easier. After I had moved into the house I got to thinking what would my wife do with that house and mortgage should I pass the great divide at any time. In order to protect her, I took out a little more than enough life insurance in an old line company on the twenty-payment life plan to cover mortgage. The next year I took out some more so as to give her something besides a house on which to live should I be taken away. I managed to have the premiums on the policies come due at different times of the year so as not to conflict with my interest and payments on the house. The result was that as soon as I made one payment I was looking forward to the next one, when and how much it was, and that I must try to get the money together as soon as possible so as not to be embarrassed when it came due. Each year the payments came easier than the preceding year, both on account of business and the reduction of interest automatically.

As I gradually began to work toward the surface of the pool of debt and I had planned when I would have my house paid for at the rate I was going, a man dropped in my office one day and said he represented Lee, Higginson & Co. and was selling securities or bonds. I told him that I was too deeply in debt to think about anything like that at that time. He said he was making regular visits to this city and that he would drop around and call on me occasionally.

A short time before this a man came in trying to sell stock in Thompson's Malted Food Co., but, being badly in debt, a talk with me netted him just as much money as a talk with a tree in the forest. He had a great line of talk and could almost make you think the moon was made of green cheese. He promised enormous dividends and to some of my friends went as far as to say that one hundred dollars invested now would inside of a year net five hundred or more. This happened several years ago and up to date I have heard of no one ever getting a dividend or any interest whatever on their money.

Another time an agent wanted me to invest some money in a silver mine in Canada. He wasn't such a good talker so he didn't influence me any. He told me of several physicians in town who had invested, thinking it might influence me, but, after observing the financial ability of physicians and dentists in general, I had come to the conclusion that if the majority of them had invested it was a pretty good thing for me to keep out of.

During this time the man from Lee, Higginson & Co. dropped in occasionally to say hello and shake hands when he was in town. When I got where I could see I was going to swing clear in another year I



thought it would do no harm to learn what I could about the bond business, so every time he came I asked him questions about bonds, etc. He gave me a lot of information on the subject and the more I learned about the business the better it looked to me. In the meantime I had a talk with a lifelong friend, whom I knew to be an investor, and whose worldly goods are far in excess of the average professional man. I asked him what he knew about Lee, Higginson & Co. and after I explained why I wanted to know he told me that he had done business with them for years and that he had always found them to be on the square, that they would not handle anything that was the least bit shady or crooked.

Finally I cleared my debt on the house and saving had become sort of a habit. It was not very long before I had a hundred dollars in the bank and all my bills paid, and I decided to buy a bond. In a few days the man representing Lee, Higginson & Co. came along and I told him I guessed I was in the market. He showed me circulars about different investments which he had, but the one that looked best to me and which he said was the best buy he had was American Can Co's. 5% bond at 92½. After a little talk about the bond I soon found out that the smallest denomination in which it was issued was \$500. I settled back in the chair and told him I could not buy it yet as I had but \$100.

Now comes the main point of my story and the part that I hope everyone who wishes to invest, but can't get enough together at one time, will look into more fully from other sources. Then he explained the installment plan of buying bonds. About how I could pay \$100 down and then whatever I could each month until it was paid for, agreeing on a stated sum. I agreed to pay \$40 each month. The bond took care of the interest on the amount I owed Lee, Higginson & Co. and I began getting 5% interest or better on my \$100 immediately after paying my \$100 down. In other words I began to receive 5% interest on \$500 while I had only to pay them 5% on \$362.50, so I was getting 5% on that which I had not paid in. I met my payments with the same spirit that I do my life insurance premiums. I know they are going to be due so naturally I try to meet them. One month I thought it was going to be impossible to meet my payments on account of a large life insurance premium and other bills, so I wrote them a letter, stating the facts but that I would make the payment as soon as possible. I received a very courteous letter from them saying it would be all right. The payment was only three days overdue when I finished some work for one of my good families and I received a check for \$115. My bills for the month were paid and I had no immediate use for the money other than to pay on the bond, so I sent them a check for \$100 as I was not confined to \$40 a month. I could pay as much and as often as I liked. In a short

time things began to break better and I was making two or three payments a month of from \$40 to \$75. It was not more than six months before I had my first \$500 bond paid for, and the day it came I felt quite proud. I took it across the hall and asked my physician friend if his Thompson Malted Food stock had any coupons attached like those.

I had had the bond but a few days when the representative called on me again and advised me to buy another of the same kind. It had taken all my spare money to finish paying for this one, but the price was right and on his advice I sent the one I had back as security toward another, this time agreeing to pay only \$25 a month. Before I realized it I had my second bond paid for and the two were sent on to me.

I had now learned how to buy bonds on the installment plan and consider it the best bit of knowledge which I have acquired. I know absolutely nothing about stocks so I leave them entirely alone. Also I haven't time to learn. I have found that the easiest way I can save money is to go in debt for a bond. It is not like going in debt for anything else because you can practically always get your money out should necessity require, as there is always a market for good securities, and if the price should go below what you pay, just hang on to it till the price goes higher, or it matures, and then you will surely be the winner. In the meantime you will be getting good interest on your money.

I had been going along in the above way until about a year and a half ago when Mr. Hall of Lee, Higginson & Co. came in. I was busy and told him I was not in the market as I had not paid for my last bond yet. He said he did not want to sell me anything but wanted to buy my American Can bond back from me at 98 and sell me in return Northwestern Elevated at 92½ and send me a check for the profit. He explained that this was just one of the many little services which the house made a practice of doing for its customers. I did as he suggested and realized a profit, but it was only the first of many little favors done by the house aside from the mere selling of securities.

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### PHYSICIANS RAISE FEES

From Boston comes the announcement that in order to meet the high cost of living the physicians of that town have agreed to double the price of consultation and to raise the price of night calls. The new schedule for visits is as follows: Between 8 A. M. and 5 P. M., \$3; between 5 P. M. and 9 P. M., \$4; between 9 P. M. and 8 A. M., \$5.—*Medical Record*, Jan. 6, 1917.



MY DEAR JIM:

I received your last letter just as I was leaving for my vacation, but as my mind was already filled with pictures of the good times I expected to enjoy, I didn't make any effort to answer it then.

However, in the intervals when the bass were not biting, I thought a good deal about what you wrote, though the results of my thinking are quite unlike the results of your thinking. You take exception to my plan of conducting practice, and say that your object is to render the best service you are capable of, meaning, I suppose, that my object is different.

Yesterday was an almost perfect day. I got on to the lake early in the morning and managed to hook a couple of pretty good ones, so that, after breakfast, I was quite contented to lie in a hammock in the shade of the big tree and enjoy myself. During this time your statement about service came into my mind and turned itself about in a good many ways.

I believe your trouble is that you don't know very clearly what your object is in life, that you have taken other people's definitions without mentally digesting them and that you are running on a superficial conception of service. You might be a good deal better off to hammer out your own definition and develop a better working schedule.

As I see it, a business man's object in life is to earn or make money. If he is a broad-minded man, he proposes to secure it rendering service to his fellow men, and the broader-minded he is the bigger service he proposes to render. You can get extreme illustrations of this by looking at some street peddler with his narrow form of service and small reward and then at Edison, Marconi, and others who have benefited the whole human race and have profited greatly. But their object, at least in the first part of their lives, has been to make money. They have definite conceptions of their own desires and propose to gratify them.

A missionary's object in life is to spend himself in the service of others. He "mortifies the flesh," that is he puts to death all his own selfish de-

sires and aspirations, contents himself with the bare necessities of life and proposes to go financially unrewarded for the labors of his lifetime. Furthermore, and you should get this clearly in mind, he proposes that Mrs. Missionary and the little Missionaries shall content themselves with the necessities, shall forego from choice or necessity, the luxuries of life and shall entrust provision for old age to Him in whose name they serve.

I thought of both of these because you seem to be an unconscious cross between the two. You write very feelingly of your patients. You express the noblest of desires in their behalf. A missionary face to face



"Your service is founded in clear vision of your patients' needs, and not in fine talk"

with the dangers of uncivilization and fired with reforming zeal could not write more nobly about those whom he longed to reach than you do about your patients. But if he was an even half-way successful missionary, I am sure he'd show more sense doing the things he writes about than I think you do.

For you don't do for these dearly beloved patients any of the things you write about so feelingly. And it seems to me that the course you actually follow precludes your doing these things for them unless you can get an appropriation from the state to support your family.

You write beautifully about the functions of the mouth, the marvel of its mechanics, the greatness of your opportunity to restore defective teeth or replace missing ones, and the benefits of insuring cleanliness where

uncleanliness formerly reigned supreme. My dear boy, I knew these things when you were so small that you thought it the greatest fun to "ride up and down" in my dental chair. You may have needed to write these things to yourself; but you didn't need to write them to me because I not only believe all them and more, but I've found out, in part at least, the principle of rendering this quality of service to my patients.

Now if I didn't know anything about your practice, you could put your expression of these noble sentiments across on me and I couldn't come back at you. But I want you to remember that I know your habits



"A narrow form of service and small reward"

and your limits, lock, stock, and barrel, and so I don't have to sit back and let you get away with something that doesn't exist.

You may write about this kind of service. You may talk about it in dental meetings and to patients, and you may fool yourself with the thought that it is the guiding principle of your life. But you don't render it, or make any intelligent effort to; and if the actual guiding principle of your life is the motive by which your actions are led, then this principle of service should be called your "talking principle" and not your guiding principle.

What is it that you do, after you've talked this sort of thing to patients? What did you do for Mrs. S——, much of whose work I have

just finished doing over? You never saw her mouth as a whole. You didn't look at it long enough or intelligently enough to discover the trouble in the faulty articulation of the second molars on the left side, and that until you corrected that, nothing else was more than piece-work. You cleaned her mouth in a half-hearted sort of way, but you left a good part of the hard brown root deposits in place, and I'll bet the amount of your fee, that you never knew they were there. How did you expect the gum tissue to heal down over them?

You put in a couple of inlays that fitted the cavities well enough but they didn't articulate with the opposing teeth and they diverted food into the interproximal spaces instead of away from them, so that the interdental papillae are destroyed and she now has a couple of fine meat holes. Is that a part of your noble service? Can you harmonize the letter you wrote me on paper with the letter you wrote in her mouth and that I had to rewrite before the good old soul could be comfortable?

Do you think you rendered her "professional service" in your lofty talking strain when you charged her \$20 for this form of mutilation? She lost the \$20 and \$200 worth more in damage that no one can repair.

Do you think the old lady can remember what you said in the face of what you did? She said to me, "You know Doctor, I've always liked Dr. Jim and I've been proud to have him do my work. But somehow he didn't seem to find out what the matter was and I wasn't much better off after he got through than when he began. I paid him quite a little money too."

I was brought up in the Methodist Church and I remember that once a Bishop came to talk to us about Foreign Missions, and of course, to ask for money. He said it required one dollar a year from each member of the church to carry on the foreign mission work properly, but that in the preceding year each member had given only 25 cents of that dollar in cash and had taken the remaining 75 cents out in talking about it. And that story comes back to me now to illustrate better than any words of mine could, just what you are doing in actual practice. You are writing and talking after the most approved fashion, and in that way are taking out about  $\frac{3}{4}$  of what you owe your patients. I am sure the patients would like it much better if they could break fifty-fifty or even 50-50, with the ninety in service and the ten in talk.

Of course I have to come back to the part of my programme that you don't like—the economics, but I can assure you that patients like it. For some years of my early practice I was like a prisoner seeking a way of escape from a closed room. After a time I found the spring that had been hidden from me in the principle of good economics, really good service at a proper fee.



I think you need to find out just what is your real object in life, to free yourself from the mental dimness of vision that now clouds your path. If you are a missionary, serve freely, give yourself body and soul and trust Him in whose name you serve for reward here and hereafter and for support for your family. If you are a business man, a big, broad, business man, recognize that it is your duty to serve well and to receive therefor a proper reward; but learn to understand that your service is founded in clear vision of your patient's needs and in your achievement, and not in fine talk.

You have a noble place to fill and much needed service to render. You will fill that place much better from every point of view when you recognize clearly what you propose to do and how you propose to do it.

And my observation is that the patients benefit even more than you can by your recognition of your place and your rights.

Those patients are best off and are most cheaply served whose dentists recognize that good service is deliberate and painstaking and that it is entitled to its just reward.

*Bill*

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*Editor DENTAL DIGEST:*

How much should a dentist in a small farming community—town of about 3,000, no dentist nearer than 15 miles one way, 18 another, 8 another and one in same town who does not mind about prices but will do work for less than it costs him in every line of work—charge for pulp treatment? I mean by that either killing pulp with arsenic treatment or by pressure anesthesia. Removing pulp, giving one or two sterilizing treatments and filling cavity first with gutta percha points, then with cement. This taking from 3 to 5 visits.

Many of our patients think \$2.50 or \$3.00 too much for this work and prefer to pay 50 cents or \$1.00 to the other fellow for putting in cotton for a month or so and then extracting the tooth, or the patients coming to us when too late. Can this work when properly done pay anything for time and trouble at the prices given? What can we do to get decent prices and still keep our patients?

R.



## PRACTICAL HINTS

[This department is in charge of Dr. V. C. Smedley, 604 California Bldg., Denver, Colo. To avoid unnecessary delay, Hints, Questions, and Answers should be sent direct to him.]\*

**GOLD INLAYS.**—Fluoric acid is undoubtedly the best agent for removing all traces of investment material but must be handled very carefully. The most convenient and safest method of handling it that I know of is as follows: Two rubber crutch tips are obtained, one smaller than the other, so that the larger one will form a cup for the smaller. The smaller is placed in the lid of a tin and covered with plaster to about  $\frac{1}{2}$  of the top. This makes a good solid stand which is not likely to be overturned. The larger crutch tip is used as a cover, preventing "fuming" and damage to articles it may be placed next to. Gold inlays should be kept in this receptacle until they are wanted when it will be found that they go into place perfectly.—P. ROY NEWLING, D.D.S., Adelaide, So. Australia.

**RESTORATION OF OCCLUSAL SURFACE IMPORTANT.**—Recently at one of our study clubs one of the dentists present asked me about an inlay with which he was having trouble. Food was packing in between the teeth to such an extent that he was not using that side of his jaw at all in mastication. I found an inlay with a close contact, but a wide one, and on examination saw that the occlusal surface had been finished with a flat surface. I trimmed the contact a little to make it narrower and then carved the occlusal surface to form, with the pits and fissures reproduced as well as I could under the circumstances. He went home and ate a chicken dinner on that side of his mouth without a shred of food finding its way between the teeth, and during my stay in that city he continued using the tooth with perfect comfort. I only use this as an illustration of the importance of always restoring the occlusal surface of the tooth in order to maintain masticatory efficiency and as a preventive of the distressing condition of food impaction.—J. V. CONZETT, *Dental Review* (The Dental Summary).

\*In order to make this department as live, entertaining, and helpful as possible, questions and answers, as well as hints of practical nature, are solicited.

**RESTORING THE CONTACT.**—When you are called upon to insert an inlay or filling in a case where the contacts have loosened you should wedge the teeth till you tighten the contacts on either side and then you should make the mesio-distal width of the inlay a little bit greater than would seem necessary to make a tight contact, and force that inlay in every case until the patient complains. When you drive the inlay to place, the patient will say: "That is too tight, doctor; I can't stand that." But you can assure them that it will not be uncomfortable any appreciable length of time. In doing that you not only secure a good contact in the tooth you are operating upon, but tighten the contact of the other teeth on that side. I look upon the tightening of the contact all along the arch as one of the important things.—C. N. JOHNSON.—*Western Dental Journal (Dental Summary)*.

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## QUESTIONS AND ANSWERS

### EDITOR PRACTICAL HINTS:

On page 800 of the December number of the *DIGEST*, I note your answer to the question by W. C. anent the occurrence of space around the teeth, loose teeth, etc., after vulcanizing, and allow me to say that your answer does not hit the mark. Vulcanizing at a lower temperature has a little effect, but not a great deal. The shrinkage of the rubber still takes place, **and unless means are employed to counteract it**, the dentist will, at times, be disagreeably surprised by visible evidence of its occurrence.

A number of months ago, a Texas dentist asked for advice in consequence of his having a somewhat similar experience. If I remember right, his complaint was on account of the shrinkage of the rubber away from the surface of metal plates. I answered this question, and if you will refer back to what has heretofore been published in your department, you will find it. I have no record of it, but it must have been last spring or summer.

One consequence of the prevailing method, or lack of method, in vulcanizing, is the unsanitary condition of vulcanite dentures. The shrinkage occurs under the teeth, where it cannot be seen and spaces are formed in which mucus and food particles lodge, remain and putrefy. In these days, when so much is made of oral antisepsis, you can do some service if you will remember what I am writing and have written, and give advice, when it is asked for, more pertinent than your answer to W. C.

The shrinkage of rubber in vulcanizing has been known to me for about thirty years, and I have written about it, and described the method

for counteracting it, with but little effect. Only a few of the teachers in colleges have paid any attention whatever to the subject; and if they ignore it, what may be expected of the average dentist?

And so they go on, ad infinitum, and ad nauseam, when you have occasion to take a tooth or gum section from an old plate, and see and smell the stench there is behind it, and think of its being in any one's mouth!

The whole secret of the counteraction of shrinkage is in two steps in flasking and packing.

Cut away **all** the surface of the parting surface of the plaster, **except a very narrow margin surrounding the cavity in which the plate is to be moulded.** No gateways are to be cut through this margin for the escape of the rubber from the mould. **It must be imprisoned.**

Use **spring pressure** upon the flask, allowing it to yield and open, and to close again. This pressure should be about 500 pounds. Any form of spring pressure may be used, either the Donham Spring, or spiral spring upon the flask bolts.

Good vulcanizing is certainly out of the question with rigid bolts to close the flask.

Yours very truly,

GEORGE B. SNOW.

[The above remarks and reproval are correct and just. My answer to W. C. was not sufficient. I always vulcanize under spring pressure and think it the only right method. Don't know why I failed to mention it in this case for, as Dr. Snow says, it is the most essential point.—V. C. S.]

#### EDITOR PRACTICAL HINTS:

If G. B. H. will write me, sending an impression obtained with the mouth closed and face working, I will send him back a base plate with a vellum rubber palate in it and it won't cost him a cent and I will send him full particulars as to how I make it. If his results are as good as mine have been he can buy the baby hightop boots and we will prepare an article explaining in detail our procedure. It is for dentistry and some unfortunates.—W. M. MILLER, Flint, Mich.

#### EDITOR PRACTICAL HINTS:

Under the head of questions and answers in the January DIGEST, question No. 2 signed G. B. H., I wish to add just a little to the answer from V. C. S.

The muscles should be carefully separated from the ridge with a clean sharp knife and adhesion prevented by having a plate ready to slip in the mouth. The part of the plate coming in contact with the wound

should be covered with iodoform gauze held in place with sterile varnish. After the wound has healed a plate may be made that will remain in place under all conditions.

Yours truly

J. E. STOREY, Beaumont, Tex.

*Question.*—1st. Why cocaine is contra-indicated during gestation? Prof. Gorgas, Warren, and others say it is contra-indicated. No medical book mentions this contra-indication. Da Costa says that this drug should be used with caution upon operation upon the head and face, but does not mention the state of gestation in his books. Prof. Hare of Philadelphia recommends its use for vomiting during early months of gestation. 2nd. Is cocaine contra-indicated during lactation? If administered to a woman who is lactating can the drug be excreted in the milk and its effects noticed in the child? Da Costa uses cocaine applied to the breast for arresting secretion of milk when it may be necessary. Could the drug also suppress secretion of milk if administered for extracting? 3rd. Could nitrous oxide and oxygen combined be followed by chloroform narcosis without danger? By ether? Prof. Paden says it could be done. What is your own opinion? How long will nitrous oxide gas stand in the cylinder without undergoing changes that may be dangerous to the patient? What about the same with oxygen cylinder. I have several cylinders filled long since and want to know if they could be used with safety.—J. B. R. D.

*ANSWER.*—My experience with cocaine has been that it is possible to use it at any stage of gestation. The thing to keep in mind is the amount used. This also applies to lactation. Have not seen any bad effects occur to nursing babe. It has been my practice to confine myself to the extraction of not more than two teeth at a sitting for such cases. Nitrous oxide and oxygen anesthesia can be followed by an ether or chloroform sequence; however, this should never be done in a dental chair for no patient should have ether or chloroform anesthesia administered to them while in a sitting position. They should be *laid down flat with all tight clothing removed*. Nitrous oxide and oxygen can be kept indefinitely in the original cylinders.—JNO. W. SEYBOLD, M.D., D.D.S., Denver, Colo.

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*Editor* DENTAL DIGEST:

In regard to double rooted cuspids, I have one exactly like the one described in THE DIGEST for February. Mine is also a double rooted lower right cuspid, and was extracted from a middle-aged woman preparatory to making a lower denture. I understand that lower cuspids frequently have two roots—is it so?—F. J. T.

# THE BEST OF CURRENT THOUGHT

[*The Dental Review*, February, 1917]

## *Original Communications*

\*The System of Movable Removable Bridgework in Conformity with the Principle that "Teeth Move in Function." By Herman E. S. Chayes.

Some of the Present Tendencies in Operative Dentistry. By C. N. Johnson.

Thoughts of Modern Dentistry. By Sydney J. Knowles.

Dental Radiography as Applied to Modern Dentistry. By Floyd D. Leach.

Operative and Post-Operative Treatment for the Removal of Impacted Third Molars. By Walter G. McGauley.

The Odontological Society of Chicago.

Northern Illinois Dental Society Twenty-ninth Annual Meeting, Held at Aurora, October 18, 19, 1916.

A Confidential Word to the Conscientious X-Ray Man. Editorial.

THE SYSTEM OF MOVABLE REMOVABLE BRIDGEWORK IN CONFORMITY WITH THE PRINCIPLE THAT "TEETH MOVE IN FUNCTION."\*

By HERMAN E. S. CHAYES, D.D.S., NEW YORK

## EXERCISE OF TISSUE NEEDFUL IN HEALTH

All tissues must be exercised, or, rather, they must have the freedom to indulge in such exercise as they need, and all tissues of all organs need exercise to keep them from undergoing atrophic changes. Hence, anything which would interfere with the free and unhampered undulations of the gum tissue, by any means whatever, results in pathological conditions by bringing about, first, a lethargic state in the tissue; second, diminution in vaso-motor actions, because of lack of re-stimulations; third, an accumulation of waste material in the cellular and intercellular substance resulting in a rapid death of cells; fourth, an atrophy or loss of tissue resulting in a physical change which makes it difficult to maintain a hygienic balance.

Besides serving as bacteriological breeding places, the usual kind of bridgework, which in the exercise of our vocation we have often been called upon to clean and which we must now condemn, serves also to rob the teeth acting as abutments and a surrounding gum tissue of every change of free and unhampered motion, and such work brings about all

\*Abstract, from paper.

the deleterious consequences mentioned heretofore. It will be well for us to remember that in all cases where teeth have been lost, and where artificial substitutes in the shape of bridgework are to be resorted to, the rational thing to do is to make the mucous structure carry the stress. The abutments or natural teeth, which act as supports for the bridge, must simply serve to prevent the vertical displacement of it during mastication, and they must so interplay with the bridge that they (the abutments) will be effectually kept from migrating into the fields other than their own. Outside of these two requirements nothing more should be expected from them. The bridge itself must during mastication gently and to a limited extent ride upon the alveolar ridge covered with the mucosa, and so be made to supply the intermittent stimulating interferences, essential for the enhancement of fresh nutriment by virtue of the increased pressure—induced circulation to the end tissues.

Artificial restorations in the form of bridgework must be constructed, so that they will not interfere with the maintenance of the hygienic balance essential to proper sanitation.

Wherever you find a crown the circumference of which extends away from the gingival circumference of the tooth, you have discovered or uncovered an inhibitory interference with the maintenance of correct oral conditions. Any piece of bridgework presenting the possibilities of retaining food débris, or exercising an unequal pressure upon the alveolar ridge, or lacking in occlusal restoration, or lacking in anatomical acceptableness, is an inhibitory interference with the maintenance of correct oral conditions. The elimination of these inhibitory interferences, and the substitution of proper restoration in the cases involved, will, therefore, constitute operations conducive to the health of the individual, and so may be classed as a correct dental operation.

[*The Dental Outlook*, February, 1917]

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#### *Propaganda and Convention Number*

- An Appeal to the Members of the Dental Profession. By Nathan Gassen, D.D.S.
- Annual Report of the President. By Dr. L. M. Robins.
- Address Delivered by the Editor of "The Dental Outlook." By Leon Harris, M.D., D.D.S.
- Annual Report of the Education Committee. By M. William, D.D.S.
- Annual Report of the Legislation Committee. By M. S. Calman, D.D.S.
- An Appreciation and a Suggestion. By K. G. Rosahn, D.D.S.
- Post-Graduate Classes
- Morse's License Revoked.
- New Activities of the Allied Dental Council. Editorial.
- Non-Participating Growth Within Recent Years of Guaranteed Insurance. Insurance Department.



[*The Dental Summary*, February, 1917]*Regular Contributions*

Oral Hygiene—Its Relation to Anesthesia, Analgesia, and the Anesthetist.

Modern Methods of Root-Canal Treatment and Filling. By Edgar D. Coolidge.

Root-Canal Therapy. By Fred D. Miller.

Oral and Sinus Surgery Under Nitrous Oxid-Oxygen Anesthesia in the Forward Inclined

Sitting Posture. By Ira O. Denman.

On the Etiology of Systemic Infection. By Henry W. Morgan.

The Effects of Focal Infections on Heart, Kidneys, Liver, and Other Organs. By C. J. Carmichael.

Clinical Diagnosis. By R. B. Bogle.

Treatment and Prognosis of Oral Focal Infections. By Celia Rich.

The Dental Phase of Health Conservation. By Homer C. Brown.

Pyorrhea. By Franklin B. Roberts.

\*Adapting the Gysi Adaptable Articulator—Selecting the Teeth—Instructions in Staining Artificial Teeth. By W. H. Richards.

The Nurse Anesthetist.

ADAPTING THE GYSI ADAPTABLE ARTICULATOR—SELECTING THE TEETH—  
INSTRUCTIONS IN STAINING ARTIFICIAL TEETH

By W. H. RICHARDS, D.D.S., KNOXVILLE, TENN.

Mount the horseshoe plate on the lower trial plate, by heating and working the sharp projections into the trial plate. Set in the mouth and take upper trial plate; heat occlusal surface; place in mouth; have patient close in normal relations, and if horseshoe plate makes imprint over entire surface, the pressure is equalized; if not, repeat. Next, mark the location of the condyle head at a point one-half inch in front of the tragus of the ear, on a line to the corner of the eye. With the ground glass and face-bow in place, measure and record the lateral or inward movement with the pencils which are in a vertical position, and the point of the pencil at the mark indicating the condyle head. Have the patient make a lateral movement of the jaws, being sure to indicate the starting point. Place the glass-holder on level surface, and with a rule draw a straight line crosswise at the starting point, then draw a straight line through the inward movement recorded on the glass. Next, draw a line longitudinally on the glass, making the line at the starting point.

Determine the degree of angle by laying the degree-meter on the glass with the point directly in the point made by the lines drawn on the ground glass—the extreme point being the starting point. Place the O end of the degree-meter on a line with the line drawn in a longitudinal direction through the ground glass, and the line drawn through inward movement recorded on the glass will extend at point on the degree-meter, indicating the degree of inward movement (in this case 24 degrees on right and 26 degrees on left). The ground-glass frame should not be changed until all the measurements are taken from it.



To record the downward or forward movement, first turn the horizontal pencils so that the points are at the condyle heads. Move the pencils out from the skin about the thickness of your finger on one side, to keep the pencil from jabbing the face while you get marking on the other side. Take card, hold on face with edge of card on a line parallel with the occlusal plane of the trial plate, which will be on a line with the face-bow; turn thumb screw on face-bow, so pencil will press against card, compressing the spring about one-fourth of way in; have patient make lateral movement. Repeat same operations on the opposite side, then place the pencil-points against the skin at head of condyle marked before, to guide the models in placing on the articulator, and remove face-bow, seeing that the screw holding pencils in position is tight. Take the card and, with a rule, draw a line straight through the recorded mark made by the patient, lay degree-meter on card with O at occluded edge of card, and the point of degree-meter at the angle formed by the occluded edge of card; and line drawn through the recorded mark on card will point to the degree on the degree-meter.

To record the incisor pattern, blacken the anterior portion of horseshoe plate with wax and lamp black, and place incisor path-register on the upper trial plate in such a position that point of pin will rest on horseshoe plate and compress spring about one-half way in tube; and in order to see the pin work over the horseshoe plate, place both trial plates in mouth, after putting a little gum tragacanth on them, let the pin down on horseshoe plate, have patient make a lateral movement until a point is formed on horseshoe plate, at this mark.

Mark the trial plates that they may be placed in proper relation when taken out of the mouth. To mount on articulator, move rotation pins to farthest point out, set the lateral or inward movement, recorded on glass, by loosening thumb screw on top of condyle path, and move condyle path as degree recorded. To set downward or forward movement, loosen screw with hole through head, set the spear-shaped point at degree desired, and tighten the screw; wax models together; place horseshoe plate in face-bow, and face-bow on goose-neck tripod; regulate the pencil points with condyle pin points by placing articulator equal distance between the two condyle pins, and move face-bow up or down by setting goose-neck on tripod and balancing face-bow on goose-neck with small front set screw. Apply plaster and let set; remove face-bow, separate the trial plates and set rotation pins to the position where the guide pin follows outline of pattern on horseshoe plate.

Grind edge of centrals on an angle to centre of palate. Grind the lateral on an angle to the posterior portion of hard palate and the cuspid on an angle with a line drawn to the linguo-gingival border of first upper

molar; and the lower cuspid to the same angle. Set up anterior ten teeth so that the incisors, cuspids and bicuspid rest on a level plane, the laterals a little short of this plane, the mesio-buccal cusp of first molar rests on same plane with the disto-buccal cusp, fall short a little, forming a curve, the second molar inclined the same way, except a little shorter.

The first bicuspid should have lingual cusp little shorter than the buccal, set on an angle to produce the effect. The second bicuspid cusps should be same height and the lingual cusps of the upper molars should extend higher than the buccal cusps.

The cuspid and molar should be on a line with the bicuspid, falling back to the lingual, where a straight edge is held on buccal surface of the teeth. The lower should be set up to occlude with the uppers. The bite should be opened about one mm., and the upper posteriors lowered to articulate with the lowers; the bite opened another mm., and lower posterior raised to occlude with uppers. Raise the incisal guide pin one-half mm.; heat the upper posterior and press the uppers to articulate in lateral and occlusal positions; repeat this on the lower, and lowers again, and the teeth are ready for automatic grinding with the carborundum powder. Where grinding of teeth is necessary, it should be done on a surface where it will not mar the occlusion when jaws are at rest. The upper bicuspid should occlude with the lowers in such a manner that the point of the cusps of the upper bicuspid should occlude slightly, distally to the point between the lower bicuspid.

The occlusal groove of a tooth should not be a straight line, but should be a zigzag groove.

The greater the inward movement, the farther the over-bite can extend, as the movement will be more lateral than it will be forward. The teeth in chewing have three movements. To crush the food, the teeth move laterally over each other, and the mandible has a forward movement, caused by the action of the pterygoid muscle. It is this muscle that controls the position of the rotation point.

The six anterior teeth are selected first, the length to high lip-line, then the width of the six upper anteriors. They are selected in group, for the following reason: When you meet a person on the street, you first see a line of teeth, not showing any shape, then you see the shadows show up, then the outline of the teeth individually. Therefore, first select for the length, then width of six anteriors, then outline of the anteriors, then width of fourteen uppers. The bicuspid and molars are selected in accordance with the space left between the cuspid and tuberosity of the maxilla. The bite-and-shut is governed by the distance between the top of the ridge and the incisal edge of the bite-plate, dividing equally between both. Select lowers likewise.

[*The International Journal of Orthodontia*, January, 1917]

*Original Articles*

Face Facts. By B. E. Lischer, D.M.D., St. Louis.

Historical Studies of the Development of the Cementum of the Root of the Tooth of Young Rhesus Monkeys. By F. Hecker, B.S., D.D.S., A.M., M.D., Kansas City, Mo.

The History of Orthodontia. By Bernhard W. Weinberger, D.D.S., New York City.

Dental Foci of Infection, Their Cause and Prevention. By E. A. Schrader, D.D.S., Independence, Iowa.

An Unusual Case History. By H. B. Hamilton, D.D.S., Ithaca, N. Y.

Editorials in Dental Journals

\*Dental Fees.

Dental Judgment.

Influence of Diet on the Development and Health of the Teeth.

DENTAL FEES

[If you read one word in this editorial from the *International Journal of Orthodontia* correctly, your thought will be benefited; otherwise it will be warped.

That word is "capable" in the last paragraph. If you read it to mean merely in the professional elements of practice, diagnosis, prescription and reconstruction, you will go about as far wrong as you very well can, for there is no inseparable connection between *professional* capability and financial reward.

If you read that word to mean capable with economics of practice, you will be right. Thousands of professionally capable and conscientious dentists are overworking, are merely living in the present and are making no financial provision for the future.

Get your notions straight.—EDITOR DENTAL DIGEST.]

Much has been said and written in the past about fees for dental service. There are men practising dentistry who believe in charging for their services at so much per hour; others believe in charging a fixed fee for calls, irrespective of service rendered; others believe in making a price when work is started and adhering to this, regardless of complications unlooked for when the case is started but that may arise during the course of the treatments; and there are still others who believe that prices should be charged in accordance with services rendered and the ability of the patients to pay; these also maintain that the value of services rendered cannot be ascertained until after the work has been completed.

With the first group we do not agree. Professional men should not estimate the value of their time at so much per hour. When they do this they class themselves with the mechanics and should be satisfied with mechanics' wages. Few dentists care to do this. The advocates of this plan talk much, but think little, and their vision is quite restricted. Their reasoning is illogical and will not bear cold and careful scrutiny.

With the second class we beg to disagree. Such a course is unfair to the patient and to the dentist. It gives the patient an opportunity to im-

pose upon the dentist and certainly gives the dentist an opportunity to slough his work and impose upon the patient. These temptations should be removed as much as possible for the good of both parties.

With the third class we cannot agree because hard and fast rules can never be applied in professional work. You cannot look at a bird and tell how high it can fly. Neither can the dentist look at the condition of teeth that need dental service and tell the complications that may arise in the treatment of them. Nature is most uncertain in her treatment of Man. A seemingly simple condition may develop into one most grave and dangerous. Work that you thought might be completed in ten hours may take twenty; one must then either slough his work, be unfair to the patient and himself, or put in the time necessary to do the work well and be imposed upon.

With the fourth and last class we heartily agree. It is true that practising dentists in the country must do much work out of which they get small returns, but this they must be prepared to do, and must do it for sweet Charity's sake. In the cities this is not so necessary because the clinics at dental colleges and infirmaries take care of the poor. Those who are capable of paying for service rendered must be charged accordingly, not overlooking their ability to pay. Dentistry well done should be well paid for. To fill or crown a tooth well is worth about as much as to do a simple curettement, remove a clean appendix or repair a lacerated perineum; but in the one case \$8.00, \$10.00 or possibly \$15.00 is charged; in the other, \$50.00, \$75.00, to \$500.00. Take the nose and throat specialist; sub-mucous resection, \$50.00, \$75.00, or \$100.00; adenoids, equally as much; tonsils, as much or more. Surely a dentist to do his work well must have as delicate and refined a technic as the nose and throat operator but he gets much less for his work though his services to the patient may mean equally as much or more than that of the surgeon.

In rendering professional service there is but one guide. Do the best you can. Your ability to serve may be limited but those who possess two talents are not to be expected to do as much as those who possess ten talents and render a service equal to the ability of those who possess only two. The capable, conscientious dentist knows what his services are worth and he knows the ability of his patients to pay. Conscience is a correct guide and he who follows it makes few mistakes. When you trust your purse to an honest man you do not need to count the pennies when you put it in his keeping and then again when it is returned. A patient in the hands of an honest dentist will be justly treated and rendered a just and honorable bill.

Propagandists who spend their time in helping the dentists to get more fees would be better employed if their efforts were directed toward helping

the dentist do a better class of work, and thus merit greater fees. In the long run service plus attains its reward, the honest, capable dentist need not worry about financial returns. His chief concern should be more ability—more light. In the aggregate his fees will balance the service rendered when he does his best and strives to attain a true professional man's noblest aims.

*[The Dental Items of Interest, February, 1917]*

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Root Canal Procedure. By C. Edmund Kells, D.D.S.

The Use of the Plain Band for Molar Teeth. Discussion of Dr. Hawley's paper. By C. A. Hawley, D.D.S.

Crown and Bridgework—Safe and Sane. By A. W. Thornton, D.D.S.

Second District Dental Society. Discussion on Dr. Thornton's Paper.

An Appeal for the Use of More Exact Terms in Connection with Radiographic Diagnosis. Symposium on Bridgework.

*[Journal of the National Dental Association, February, 1917]*

Rudolph H. Hofheinz, D.D.S. Frontispiece.

*Original Communications*

Oral Hygiene and Its Relation to Public and Individual Health. By Otto U. King, D.D.S.  
Oral and Sinus Surgery Under Nitrous Oxid-Oxygen Anesthesia in the Forward Inclined, Sitting Posture. By Ira C. Denman, D.D.S.

Prophylaxis for Pyorrhea. By Paul R. Stillman, D.D.S.

Indications for the Removal of Teeth in Cases of Focal Infection. By Virgil Loeb, A.B., M.D., D.D.S.

Experimental Endocarditis—Its Production with Streptococcus Viridans of Low Virulence, By M. K. Detweiler, M.D.; W. L. Robinson, B.A., M.D.

Abstracts and Comments. By Thomas B. Hartzell, M.D., D.M.D., and Arthur Henrici, M.D.

What Does the State Dental Association Do for One? By George R. Warner, M.D., D.D.S.  
Some Root Canal Problems. By J. R. Callahan, D.D.S.

Metallurgical Studies. By Weston A. Price, D.D.S.

Preparedness League of American Dentists. By J. Wright Beach.

*[The Dental Cosmos, February, 1917]*

*Original Communications*

A Study of the Minute Structure of Dentin, Especially of the Relation Between the Dental Tubules and Fibrils. (I.) By Dr. Kanae Hanazawa.

A Study of the Dynamics Involved in the Etiology of Malocclusion. By J. G. Lane, D.D.S.

Dentistry in the Canadian Militia. By Wallace Seccombe, D.D.S.

Plate Prosthesis. By Nelville S. Hoff, D.D.S.

The Radiograph in Diagnosis. By Chas. C. Voelker, D.D.S.

A Typical Development in the Light of Correlative Variation. By Geo E. Dawson, Ph.D.

The Influence of American Dentists upon Europe. By N. S. Jenkins, D.D.S.

Artificial Restoration of Lost or Missing Tissues in Congenital Cleft Palate and Other Deformities of the Mouth. By Vethake E. Mitchell, D.D.S.

Trouble with Pulpless Teeth, and Trouble from Pulpless Teeth. By Elmer S. Best, D.D.S.

President's Address (Connecticut Dental Hygienists' Association). By Mrs. Irene Newman.



### CONVENTION HALL, ROCHESTER, N. Y.

where the 49th annual meeting of the Dental Society of the State of New York will be held May 10, 11, 12, immediately following the formal dedication of the Rochester Dental Dispensary.

The program of essays and clinics coupled with other educational features and many forms of entertainment will make this one of the most successful meetings in the history of the New York Society; in fact, it will be one of the big meetings of the year.

The manufacturers' exhibit will be exceptionally beautiful and include practically every well-known product, appliance, etc., in the dental trades.

All exhibits, clinics and meetings will be held in Convention Hall, located in the heart of the city and near the hotels, theatres and the retail shopping district.

The month of May is exceptionally beautiful in Rochester (the Flower City), which is famous for its beautiful homes, parks, scenery and extensive gardens.

The officials and members of the New York Society extend all ethical dentists a most cordial and fraternal greeting to meet with them with the assurance on their part that everything possible will be done to make their visit a pleasant and profitable one.

Programs and general information can be obtained of the Secretary, Dr. A. P. Burkhart, 52 Genesee St., Auburn, N. Y.

GENERAL BUSINESS COMMITTEE, Rochester, N. Y.

E. G. LINK, *Chairman*, 226 Cutler Bldg.

LOUIS MEISBURGER, Buffalo

WIRT H. CONKLIN, Rochester





## SOCIETY AND OTHER NOTES

### NATIONAL DENTAL ASSOCIATION ANNOUNCEMENTS

The National Dental Association will meet in New York City October 22nd, 23rd, 24th, 25th and 26th. The Headquarters will be at the Hotel Astor, situated on Broadway, between 44th and 45th Streets. This hotel has the largest ballroom in the world, and this room will be used for all the General Assembly meetings. Other large ballrooms will accommodate the sections, House of Delegates, etc., etc. The Exhibits will be shown in the beautiful Roof Gardens. Thus practically all of the meetings will occur under the roof of this spacious hotel.

Full accounts of the plans of what promises to be the largest and greatest meeting in the history of the Association will be published later. Suffice it for the present to state that the slogan for this year will be:

"QUALITY RATHER THAN QUANTITY"

Nevertheless there will be quantity also. But the important announcement at this time must be the warning, **"Reserve your rooms at once. Make reservations by mail direct to the hotel of your choice."** This may seem premature considering the abundance and variety of hotel accommodations listed below. But New York hotels are always crowded. Nearly seven hundred conventions met here during 1916. October is one of the busiest months. If you desire to get into any particular hotel, therefore, it will be safest to write at once. For example, 150 rooms have been reserved at the Headquarters Hotel, The Astor, already.

The following is a list of hotels and rates:

#### HOTEL ASTOR, TIMES SQUARE, 1000 ROOMS

(General and Registration Headquarters)

Single with bath.....	\$ 4.00	\$ 5.00	\$ 6.00
Double with bath.....	5.00	6.00	7.00
Two Connecting Rooms with bath (3 persons).....	9.00	10.00	11.00
Two Connecting Rooms with bath (4 persons).....	10.00	11.00	12.00

#### HOTEL MCALPIN, BROADWAY AND 34TH STREET, 1600 ROOMS

Single without bath.....	\$2.50	\$3.00	
Single with bath.....	3.00	3.50	4.00
Double without bath.....	3.50	4.00	
Double with bath.....	4.00	4.50	5.00
Parlor, Bedroom, and bath (for 1 or 2).....	6.00	7.00	8.00

#### HOTEL WALDORF ASTORIA, FIFTH AVENUE AND 34TH STREET, 1300 ROOMS

Single without bath.....	\$ 3.00		
Single with bath.....		4.00	
Double without bath.....		4.00	
Double with bath.....		6.00	
Parlor, Bedroom, and bath (for 1 or 2).....			14.00



## THE DENTAL DIGEST

## HOTEL JUDSON, 53 WASHINGTON SQUARE, 200 ROOMS

	E. P.	A. P.
Single with running water.....	\$1.00	\$2.50
Double with running water.....	2.00	5.00
Single with bath.....	1.50	3.00
Double, private bath.....	2.50	6.00

## HOTEL BERKLEY, 170 WEST 74TH STREET, 300 ROOMS

Single Room with bath.....	\$3.00
Double Room with bath.....	5.00

## HOTEL BRISTOL, 122 WEST 40TH STREET, 180 ROOMS

	E. P.	A. P.
Single with running water.....	\$1.50	\$3.00
Double with running water.....	2.00	5.00
Single with bath.....	2.00	3.50
Double with bath.....	3.00	6.00
Two Rooms with bath (2 persons).....	\$2.00 each	\$3.50 each
Two Rooms with bath (3 persons).....	1.75 each	3.25 each
Two Rooms with bath (4 persons).....	1.50 each	3.00 each

## HOTEL BUCKINGHAM, FIFTH AVENUE AND 50TH STREET, 260 ROOMS

Single without bath.....	\$1.50
Single with bath.....	2.50

Extra persons, \$1.00 each

## HOTEL HERALD SQUARE, 114 WEST 34TH STREET, 310 ROOMS

Single with bath.....	\$2.00
Single with privilege of bath.....	1.50
Parlor, Bedroom, and Bath.....	5.00

## HOTEL ST. MARGARET, 129 WEST 47TH STREET, 130 ROOMS

Single with running water.....	\$1.00
Single with bath.....	1.50
Two Rooms and bath.....	3.50

## HOTEL WOLCOTT, 31ST AND FIFTH AVENUE, 300 ROOMS

Single without bath.....	\$2.00
Single with bath.....	2.50
Double with bath.....	5.00

## HOTEL WOODSTOCK, 43RD STREET NEAR BROADWAY, 365 ROOMS

Single without bath.....	\$2.00
Single with bath.....	2.50
Double without bath.....	3.00
Double with bath.....	3.50
Two Double with bath.....	8.00
Two Single with bath.....	5.00
Double and Single (for 3).....	5.50
Sitting Room, Bedroom, and bath (for 1 or 2).....	7.00

A copy of the list of Hotels and Rates in pamphlet form will be sent to any member of the National Dental Association on application. Please inclose stamp.

R. OTTOLENGUI, *Chairman Publicity Committee,*  
80 West 40th Street, New York City.

## FUTURE EVENTS

- March 7, 1917.—Northeastern Massachusetts' Dental Association, Salem, Mass.—GEORGE H. NEWELL, *Chairman Exhibit Committee*.
- March 7-8, 1917.—Alumni Association of State University of Iowa, Iowa City, Ia.—B. A. WEBER, *Chairman Exhibit Committee*.
- March 13, 1917.—Fourteenth Annual Meeting of Fox River Valley Dental Society, Fond du Lac, Wis.—R. J. CHADY, Oshkosh, Wis., *Secretary*.
- March 23-24, 1917.—Denver Dental Association, Colorado College of Dental Surgery.—T. WILLIAMS, *Chairman Exhibit Committee*.
- April 4-6, 1917.—Missouri State Dental Association, St. Joseph, Mo.—J. F. WALLACE, Canton, Mo., *Secretary*.
- April 11-13, 1917.—West Virginia State Dental Society, Fairmont, West Va.—J. W. PARSONS, *Secretary*.
- April 12-14, 1917.—Michigan State Dental Society, Detroit.—C. G. BATES, Durand, Mich., *Secretary*.
- April 17-19, 1917.—Virginia State Dental Association.—C. B. GIFFORD, Norfolk, Va., *Corresponding Secretary*.
- April 20-28, 1917.—The next convention of the Texas State Dental Society, Fort Worth, Texas.—W. G. TALBOT, *Secretary*.
- May 1, 1917.—Mid-West Dental Convention and Exhibit, Des Moines, Ia. Conducted by Iowa State Dental Society and the Dental Manufacturers' Club.—JOHN R. STENSON, *Chairman Exhibit Committee*.
- May 3-5, 1917.—The Fifty-third Annual Meeting of the Massachusetts State Dental Society at Springfield, Mass.—J. ARTHUR FURBISH, *Secretary*.
- May 8-10, 1917.—The Forty-second Annual Meeting of the South Carolina State Dental Association, Columbia, South Carolina, Jefferson Hotel.—J. T. MONTGOMERY, *President*, ERNEST C. DYE, *Secretary*.
- May 8-11, 1917.—Illinois State Dental Society, Quincy, Ill.
- May 9-11, 1917.—Annual Meeting of the Kentucky State Dental Association, Louisville, Ky.—M. MARSHALL, Louisville, Ky., *Secretary*.
- May 10-12, 1917.—Dental Society of the State of New York, Rochester Dental Dispensary, Rochester, N. Y.—A. P. BURKHART, 52 Genesee St., Auburn, N. Y., *Secretary*.
- May 15-17, 1917.—Indiana State Dental Society, Indianapolis, Ind.
- May 16-18, 1917.—Vermont State Dental Association.
- May 22-24, 1917.—The Fifty-fourth Annual Meeting of the Susquehanna Dental Association of Pennsylvania will be held in Odd Fellows' Hall, 118-122 N. Ninth St., Allentown, Pa.—GEO. B. KNOX, Scranton, Pa., *Secretary*.
- May 24-26, 1917.—The Fifty-fourth Annual Meeting of the Lake Erie Dental Association will be held at the Hotel Barlett, Cambridge Springs, Pa.—D. S. STERRETT, *Secretary*.
- June 4-7, 1917.—Four States Post Graduate Dental Meeting, New Orleans, La. (Texas, Louisiana, Alabama, Mississippi.)—J. P. WAHL, New Orleans, La., *Chairman Exhibit Committee*.
- June 6-9, 1917.—Maryland State Dental Association, Baltimore, Md.—F. F. DREW, 701 N. Howard St., Baltimore, Md., *Secretary*.
- June 13-16, 1917.—Pennsylvania Board of Dental Examiners in Musical Fund Hall, Philadelphia, and the College of Pharmacy Building, Pittsburgh. The examination in operative dentistry on Wednesday, June 13th at 8.30 o'clock in the Evans Dental Institute, 40th & Spruce Streets, Philadelphia, and the University of Pittsburgh Dental Building, Pittsburgh. The examination in prosthetic dentistry will be held on Wednesday at 1.30.—ALEXANDER H. REYNOLDS, 4630 Chester Ave., Philadelphia, *Secretary*.

- June 14-16, 1917.—Connecticut State Dental Association, Hotel Griswold, New London.—G. S. B. LEONARD, Mystic, Conn., *Secretary*.
- June 19-22, 1917.—Golden Jubilee of the Tennessee State Dental Association, Memphis, Tenn.—C. E. HINES, *Secretary*.
- June 20, 1917.—New Hampshire State Dental Society, Soo-Nipi Park, N. H.
- June 21-23, 1917.—Colorado State Dental Association, Glenwood Springs, Colo.—EARL W. SPENCER, Pope Block, Pueblo, Colo., *Secretary*.
- June 26-28, 1917.—Pennsylvania State Dental Society, Philadelphia, Pa.—J. F. BIDDLE, 517 Arch St., Philadelphia, *Secretary*.
- June 27-29, 1917.—North Carolina Dental Society, Fifty-third Annual Meeting, Durham, N. C.—R. M. SQUIRES, Wake Forest, N. C., *Secretary*.
- October 22-26, 1917.—National Dental Association, New York City.—OTTO U. KING, Huntington, Ind., *Secretary*.

### THE NEW JERSEY STATE DENTAL GOLF ASSOCIATION

The New Jersey State Dental Golf Association will entertain all golfing members of the National Dental Association at one of the famous New Jersey courses, during the National Convention. All dental golfers bring clubs. Further details later.—S. H. HINMAN, *Secretary*.

### MARCH

A sodden gray in the chilly dawn,  
A burst of the red gold sun at noon;  
A windy lea for the dying day,  
And a wail at dusk like the distant loon;  
A ghost at night in the leafless larch,  
A sigh and a moan,  
And this is March.

A frown in the morning black and dim;  
A smile when the day is half-way run;  
A moan when the wind comes up from the sea,  
And tosses the larch when the day is done.  
A penitent, changeful, grewsome thing,  
Is this fierce love child  
Of winter and spring.

It is mad with the love of an unloved one,  
It is chill with the winters that long have set;  
It is sad at times and anon it laughs,  
And it is warm with the summer that is not yet,  
And its voice laughs loud in the leafless larch.  
But to sigh again!  
And this is March.

A dose of quinine when the sun comes up  
From its tossed-up bed in the eastern sea;  
Some castor-oil when the moon has sped  
A blue pill dark and catnip tea;  
A decoction made from the leafless larch,  
And another blue pill,  
And this is March.—Sel.—*Healthy Home*.